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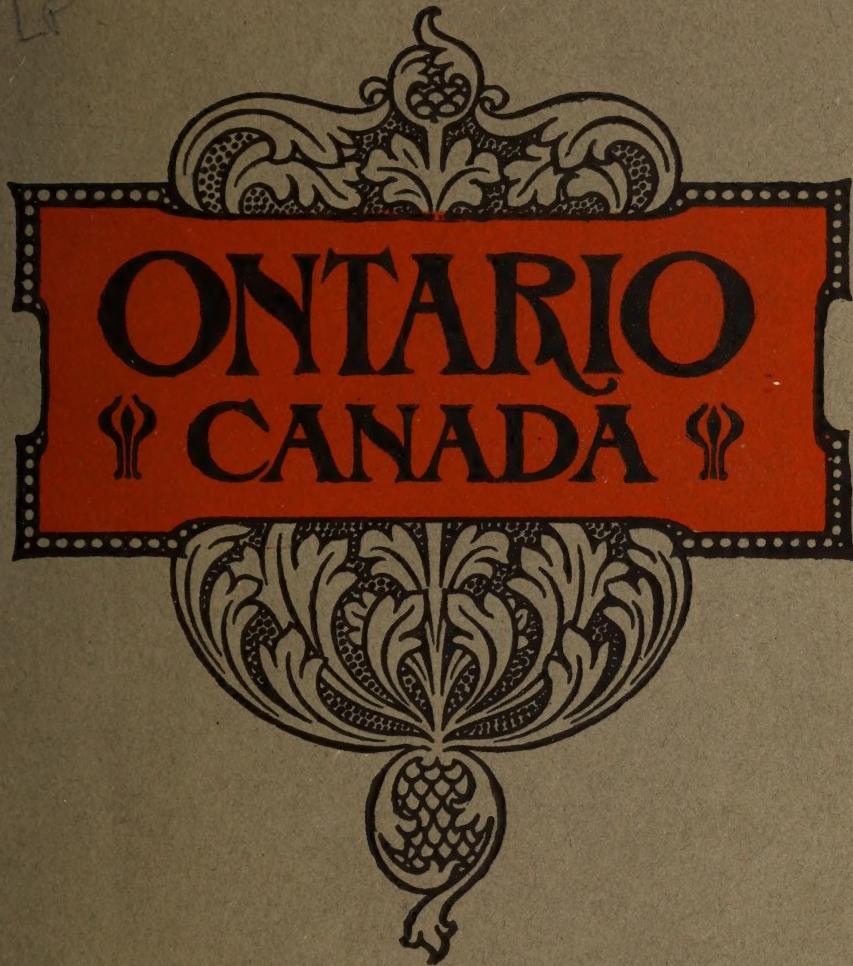
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*The EDITH and LORNE PIERCE
COLLECTION of CANADIANA*



Queen's University at Kingston

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**A STATEMENT
CONCERNING THE
EXTENT
RESOURCES
CLIMATE AND
INDUSTRIAL DEVELOPMENT
OF THE
PROVINCE OF ONTARIO
CANADA**

**PREPARED BY DIRECTION OF
THE HON. E. J. DAVIS
COMMISSIONER OF CROWN
LANDS**

1901C 2

Printed by Order of the Legislative Assembly of the
Province of Ontario by L. K. Cameron, Printer
to the King's Most Excellent Majesty,
Toronto, 1901.

TORONTO :
WARWICK BRO'S & RUTTER,
Printers and Binders.

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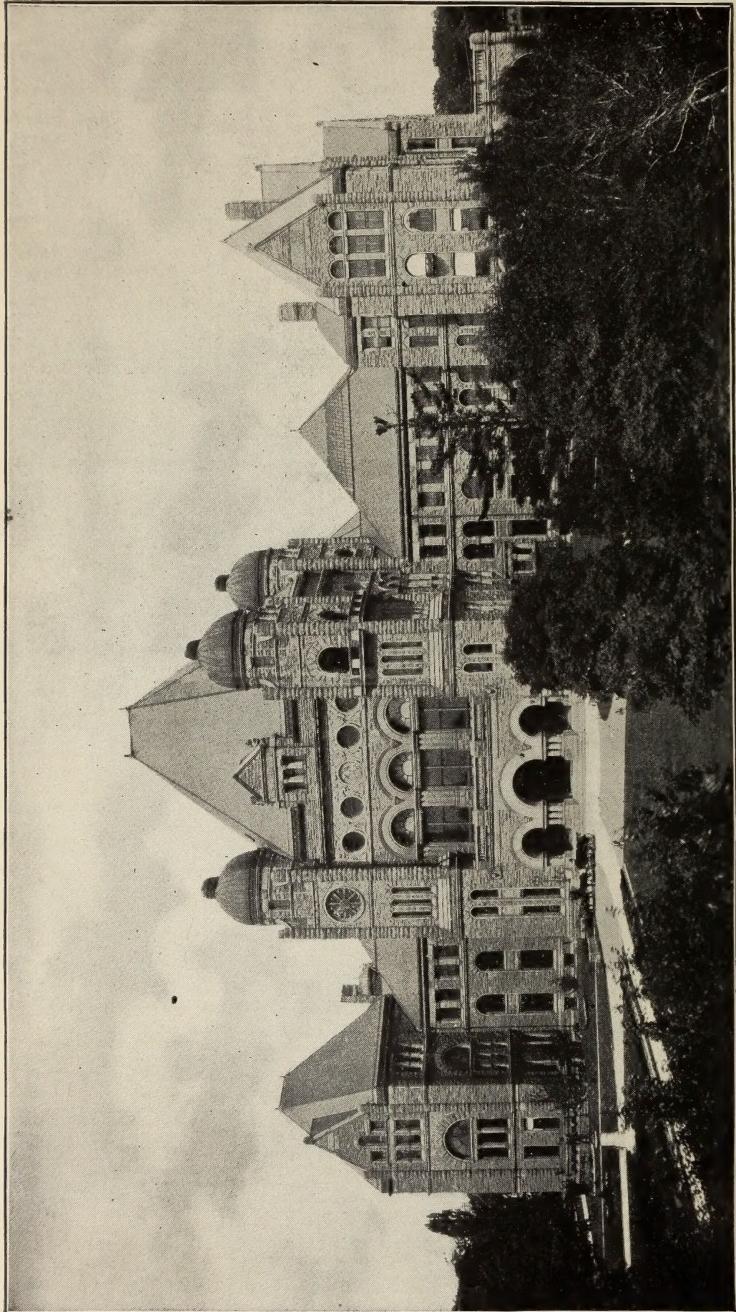
Northern Ontario

Mineral Resources

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THE ONTARIO PARLIAMENT BUILDINGS,
TORONTO.

The Province of Ontario

INTRODUCTORY SURVEY

HE history of the early settlement of Ontario dates back about one hundred and fifteen years, to the close of the American War of Independence. In 1784 about 10,000 of those who desired to maintain their allegiance to the Motherland, migrated from New York, Pennsylvania, and the New England States, and settled along the River St. Lawrence, around the Bay of Quinte, on the shores of Lake Ontario and in the Niagara Peninsula. They are known to history as the United Empire Loyalists, and were of varied descent, numbering among them many sons of England, Scotland and Ireland, besides persons of German, Dutch and Huguenot origin. Some were farmers, but the greater number consisted of discharged officers and men who had served Great Britain

Early Settlement. in the late war, and were unaccustomed to pioneer life. They began the arduous task of felling the trees, clearing the land, (for

Ontario was an unbroken forest) the building of rude houses and barns, and the planting of cleared ground among the stumps of the forest trees with wheat, oats, and potatoes for the sustenance of themselves and their families. In 1812 the population had grown from practically nothing to 80,000, all of whom, with the exception of a few hundred, were engaged in tilling the land. At this time the principal articles exported from the farms were oak and pine timber, and potash distilled from wood ashes. Gradually a larger amount of land was brought under cultivation, and more substantial dwellings and farm buildings of sawn lumber took the place of the first crude log structures. In 1830 there were five towns in the Province of over 1,000 inhabitants each, viz : Brockville, 1,130 ; Hamilton, 2,013 ; London, 2,415 ; Toronto, 2,860 ; and Kingston, 3,587. The Province could also boast of one daily paper and one bank.

At the end of the second thirty-year period, namely in 1837, the population had increased to 397,500, by far the greater portion still living on the farm.

During the third period, from 1837 to 1867, an extensive immigration set in from England, Scotland and Ireland. The great famine of 1846 sent

THE PROVINCE OF ONTARIO

Irish immigrants to America by tens of thousands. These new comers, who were a very fine class of settlers, located as a rule in groups or blocks, which formed the nuclei of some of the richest townships of Ontario. In this manner arose the Highland settlement of Glengarry, the settlement of English gentlemen and retired military officers near Cobourg, the Irish settlement near Peterboro', the military settlement near Perth, the Talbot settlement in Elgin, the Canada Company's settlement in the Huron Tract, the block of Paisley weavers in Wellington, the Germans in Waterloo, Huron and Renfrew, and the French Canadians in Essex, Prescott, Russell, and along the Canadian Pacific Railway west of Mattawa.

The year 1853 saw the beginning of the railway era, the first line in operation being that from Toronto north to the town of Bradford. This was followed three years later by the establishment of railway connection between Montreal and Toronto by the Grand Trunk Railway, after which the work of improving communication and transportation facilities was pushed forward with vigor.

The lumbering industry now assumed very large proportions, and the lumbering and railway operations combined with the influx of immigrants and capital, greatly stimulated all branches of trade.

To-day Ontario has a population of about 2,500,000. Its primary sources of wealth are four in number—its farms, its forests, its mines, and **Population.** its fisheries, which will hereafter be briefly described. To these is added manufactures as a fifth. Agriculture is still by far the most important industry in Ontario, representing \$900,000,000 of invested capital and an annual production of over \$200,000,000.

Ontario has an estimated area of nearly two hundred thousand square miles,—not including that portion of the Great Lakes that lie within the international boundary,—with an extreme length from north to south of 750 miles, and a breadth of 1,000 miles. It is larger than the nine north Atlantic states

Area. of the American republic by one-third; larger than Maine, New Hampshire, Vermont, New York, Pennsylvania and Ohio combined;

Hampshire, Vermont, New York, Pennsylvania and Ohio combined; larger than Great Britain and Ireland by seventy-eight thousand square miles. It is only four thousand square miles less than the French Republic, and only eight thousand less than the German Empire. Its extent cannot be fully realized until one has travelled from end to end over its territory. Commence, if you will, at one end, say Montreal, and travel by express train on the Canadian Pacific Railway all day and night, all the

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day following, the night following and on into the next day, and you still find yourself whirling over territory belonging to that Province. Less than twenty per cent. of the Province has as yet been settled, over eighty per cent. still being in the hands of the Crown. In round figures there is an area of 100,000 square miles unsurveyed, a considerable portion of which is almost unexplored. In area Ontario alone is vast enough to become the seat of a mighty empire, and its great resources warrant it in aspiring to a position of greater importance.

The geographical situation of Ontario, bringing its southern limits almost to the centre of the continent, and its remarkable water transportation facilities, afforded by the lakes and rivers which bound it on all sides, are points in its favor that many countries might envy. Consider the position of Ontario on the great waters that open to the commerce of the world—the mighty inland seas, Superior, Huron, Erie,

and Ontario, with their outlet to the ocean, the River St. Lawrence. While its northern point is a port on James Bay,

Geographical advantages. its southern point, further south than Boston or Chicago, is washed by the waters of Lake Erie, which forms with the other great lakes the finest system of inland waterways to be found anywhere. Note how like a wedge the territory of Ontario is driven right into the heart of the great agricultural states of the American Union; consider how many large cities there are on the American shores of these lakes and throughout the territory adjacent thereto, important centres of industrial population, which may by means of these waterways be easily and cheaply reached. Consider that by a little deepening and widening of channels and canals that already exist, ocean vessels of deep draught might be brought to the doors of the citizens of Ontario's capital itself; how with a little widening and deepening of the present canal system at Niagara Falls, these same vessels might pass through Lake Ontario and Lake Erie, and after touching at such ports as Buffalo, Detroit and Chicago, proceed on their way through Lake Huron to the City of Duluth, at the farthest western limit of Lake Superior, thus penetrating half way across the continent, a distance of 2,384 miles and there tapping the prairies of the West. Already vessels drawing fourteen feet have sailed from Lake Superior to Europe, and vessels drawing twenty feet sail from Lake Huron to Lake Superior ports. There now passes through the Sault Ste. Marie canals at the juncture of Lakes Superior and Huron, in the seven months of navi-

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gation, a greater tonnage of shipping, American and Canadian, than passes through the Suez canal in the whole year. These facts make it readily apparent that the geographical position of Ontario gives her many of the advantages of a maritime country, including remarkable natural facilities for the cheap distribution of her products, whether of the field, the mine, or the forest, to the markets of the world.

To facilitate description, it will be necessary to divide the Province into two districts, namely, the southern, or settled portion, and the northern, or sparsely settled portion. The settled portion is contained within the triangle or wedge of country, the apex of which extends southward into the territory of the United States, to the

Southern Ontario.

latitude of the City of New York. This triangle, 49,000 square miles in area, forms practically an island, washed by the waters of two large rivers, the St. Lawrence and the Ottawa, and three of the great lakes, Ontario, Erie and Huron, thus possessing opportunities for commerce such as few other inland countries enjoy. It contains over twenty-three million acres of occupied farm lands, and nearly the whole of Ontario's population is to be found within these boundaries. Southern Ontario is for the most part of great fertility, and may be described as purely agricultural land of considerable development, suited by its soil and climate to all branches of farming. In this respect it is very similar to New York State and other adjacent States of the Union.

Most of the leading cities and towns of Southern Ontario are located on the shores of the lakes and rivers named above. The following brief description will give an indication of their size and commercial importance.

Toronto. Toronto, the prosperous capital of Ontario and the second city in Canada, is situated on the north shore of Lake Ontario, and has a population of about 225,000. It is the principal commercial and distributing point of Central Canada and the seat of the University of Toronto and many other leading educational institutions. Its mercantile importance is indicated by the extent of the financial transactions of its banks, the bank clearings for 1900 amounting to \$513,695,401, an increase of \$9,222,554 over the previous year. The value of the exports from Toronto during the year ending June the 30th, 1900, was \$9,506,911, and the value for the imports for the same year was \$31,787,053.

Toronto has numerous and important manufacturing industries, including extensive iron foundries, railway shops, pork-packing houses, ship



PARLIAMENT AND DEPARTMENTAL
BUILDINGS, OTTAWA, ONT.

THE PROVINCE OF ONTARIO

yards, distilleries, carriage, piano, and agricultural implement factories. The city occupies an unrivalled position as a railway centre, the Canadian Pacific and Grand Trunk Railway systems with their tributary roads making it the radius of eight lines to the north, east and west, while in the open season a large amount of traffic is conducted by the fine lines of steam-ships which ply regularly to Montreal and the leading Lake Ontario ports.

The accessibility of all the picturesque region to the north bordering on the Muskoka Lakes and the Georgian Bay, and the central position of Toronto with regard to other points of interest, result in attracting to it a very large number of tourists every season. It possesses excellent hotel accommodations, banking and telegraph facilities, and one of the finest and best-equipped electric street car services on the Continent. Few large centres of population are so well provided with spacious parks and recreation grounds. Its numerous public buildings include the City Hall, recently erected at a cost of \$3,600,000, the Provincial Government buildings, occupying a commanding position in the Queen's Park, and the University of Toronto close at hand. The business streets which are solidly paved with asphalt are adorned with many handsome structures. The residential and educational advantages of Toronto induce large numbers of well-to-do people to become citizens and few communities surpass it in the air of prosperity, comfort and neatness, observable in its many miles of spacious, well-shaded streets.

Ottawa. The city of Ottawa, which is the capital of Canada, is picturesquely situated on the Ottawa River, forming the boundary line between the Province of Ontario and Quebec, its population being about 50,000. It is about 100 miles distant from Montreal. Its most conspicuous feature is the handsome and substantial Parliament and Departmental Buildings which occupy a central and commanding position, and there are also some fine educational buildings and churches. Rideau Hall, the residence of the Governor-General, is situated in the suburbs. Ottawa is well laid out with wide streets and has a model electric railway service. Its most important business interest is the lumbering trade drawn from the extensive region of the upper Ottawa and its tributary streams. The navigation of the Ottawa River is interrupted by the Chaudiere Falls, which furnish a magnificent water-power for a large number of lumber mills and wood-working establishments. Its industries also include pulp and paper and woollen manufactures, machine-shops, foundries and car-shops.



AN EXPLORERS' CAMP :
Northern Ontario.

THE PROVINCE OF ONTARIO

The handsome and prosperous city of Hamilton is very attractively situated on a beautiful bay at the extreme western end of Lake Ontario, 40 miles by rail southwest of Toronto, and 56 miles northwest of Hamilton. Niagara and the American border. Population 50,000. Hamilton occupies an alluvial plain lying between the bay and the escarpment (or "mountain" as it is locally called)—a continuation of the height over which the Niagara plunges at the Falls. From this summit a magnificent view may be had. The city lies immediately below, and beyond it the broad blue waters of Lake Ontario stretch away to the eastern horizon. The plain is covered in all directions with fine farms and dotted with thriving villages, for the city is the center of a magnificent farming section devoted largely to fruit.

The total capital invested in the manufacturing industries of the city is about \$8,000,000, and the number of men employed is 14,000. It has extensive manufacturing industries, including woollen and cotton mills, sewing machine, glassware, boot and shoe, stove and implement works machinery, water and gas pipes furniture, saw, and planing mills, rolling-mills, bolt and tack works breweries etc. There are a number of fine public buildings, including one of the finest insane asylums in the Province, besides numerous well built schools churches an opera house two hospitals and a large public library.

London. The city of London, 76 miles west of Hamilton and 121 from

Toronto, is the centre of one of the leading agricultural districts of the Province. Its population is 32,000. Its chief industries are agricultural implements breweries, car-shops, chemical works brick and tile works, and boot and shoe factories, and it ships grain, live stock and farm produce, besides the articles above named.

Kingston. Kingston is situated on the River St. Lawrence, 172 miles west of Montreal, about half way between that city and Toronto. Its population is nearly 20,000. Chief industries: locomotive, car and steam engine shops quarries agricultural implements, cotton and hosiery, pianos organs, chemicals, etc. It has an English and a Roman Catholic Cathedral and two important colleges — the Royal Military College and Queen's University; also an observatory museum and library.

Brantford. The city of Brantford on the Grand River, is one of the most enterprising and progressive of the smaller cities of Canada and has a population of nearly 20,000 people. Some 3,000 men are employed in

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the different manufacturing establishments, the leading industry being the manufacture of agricultural implements. Brantford stands third among the cities of Canada in the export of manufactured goods, and it is also an important agricultural centre. It is served by the Grand Trunk, and the Toronto, Hamilton and Buffalo Railroads, and is the seat of the Provincial Institution for the education of the blind. The Six Nation Indian Reserve is in the immediate neighborhood, and in the burying ground attached to the old Mohawk church lie the remains of Chief Joseph Brant, the faithful ally of the British during the Revolutionary war.

The other cities of Ontario are Guelph, St. Thomas, Belleville, Chatham, St. Catharines, Stratford, Windsor and Woodstock.

Northern Ontario. As the pioneers in the early days in Ontario proceeded northward, hewing down the forest before them in their path and preparing the land for the plow, they soon found that the country underwent a complete change in its character. Instead of the continuous stretch of arable land they were accustomed to in the south, they found rock and river, hill and lake on every hand, and almost impenetrable forest ; and so unsuited did it seem to farming purposes that they soon desisted from their efforts to settle it. Later on the lumberman penetrated its more accessible regions, and as that industry grew and thrived, towns and villages sprung up here and there devoted largely to lumbering, saw-milling and kindred businesses. As time has progressed, it has been gradually demonstrated that it possesses not only great forest wealth, but perhaps even greater mineral wealth ; and not only so, but that immense sections of it are equally well suited for agriculture as the land in the southern part of the Province.

Area. Northern or "New" Ontario is estimated to contain 141,000 square miles, and has an area almost three times as great as Southern Ontario. It is divided into four districts, Nipissing, Algoma, Thunder Bay, and Rainy River. Until very recently little was known of the capabilities of the major portion of this territory. A very limited amount of systematic exploration had been undertaken, and the country

Recent Exploration. remained in a great measure an asset of unknown value to the Province. In order to learn more definitely the nature of its re-

sources, the Provincial Government in 1900 organized a number of exploration parties, who traversed the country from the Quebec boundary in the East to the Manitoba boundary in the West, and northward

THE PROVINCE OF ONTARIO

from the better known districts to the Hudson Bay Slope. The result has been to demonstrate the fact that the value of the country, especially as regards its agricultural resources, is far greater than had been supposed. That the northern country contained great forest wealth, and probably great mineral wealth, had previously been admitted, but the astounding fact was not looked for by many that an agricultural region of

Agricultural Land. undoubtedly fertility, with an acreage greater than the whole of Ontario at present under crop, extended from Lake Temiskaming in

the East almost entirely across the province. To this section, which lies between the 49th and 50th parallels of latitude, has been given the name of the "Great Clay Belt," and it is estimated to contain 24,000 square miles, or 15,680,000 acres. To say that this territory could be made to support a population of a million souls is surely not an overestimate. Almost the whole of this region is well adapted to agriculture. It is well wooded, and is watered by no less than seven large rivers of over 300 miles in length which flow northward to Hudson Bay, while, in addition, there are numberless smaller streams and lakes. Nor is the climate by any means an obstacle to the settlement of the country, as many have supposed. Although it lies in the North from the point of view of the people of Old Ontario, it should be borne in mind that, as a matter of fact, it is in the same latitude as Southern Manitoba and the northern portion of the States of Minnesota and Dakota.

Discovery very Valuable. What this discovery (and from the indefiniteness of the knowledge that existed previously, it can scarcely be regarded in any other light,) means to the Province is gradually being realized.

One of the first results will be the stimulating of railway enterprise. Afterwards will follow the gradual settling of the country, and the development of its dormant resources. At present the region is inaccessible to the settler, but that it will not long remain so is apparent from the number of railroads leading to it that are already in course of construction or are projected.

There are, however, many other fine agricultural tracts in New Ontario to which the objection of inaccessibility cannot be said to apply. To these the attention of the home seeker may be directed. Among them may be mentioned the Rainy River Valley, on the Minnesota boundary, containing from 750,000 to a million acres of land of literally unsurpassed fertility; a very important area at the head of Lake Temiskaming, containing fully



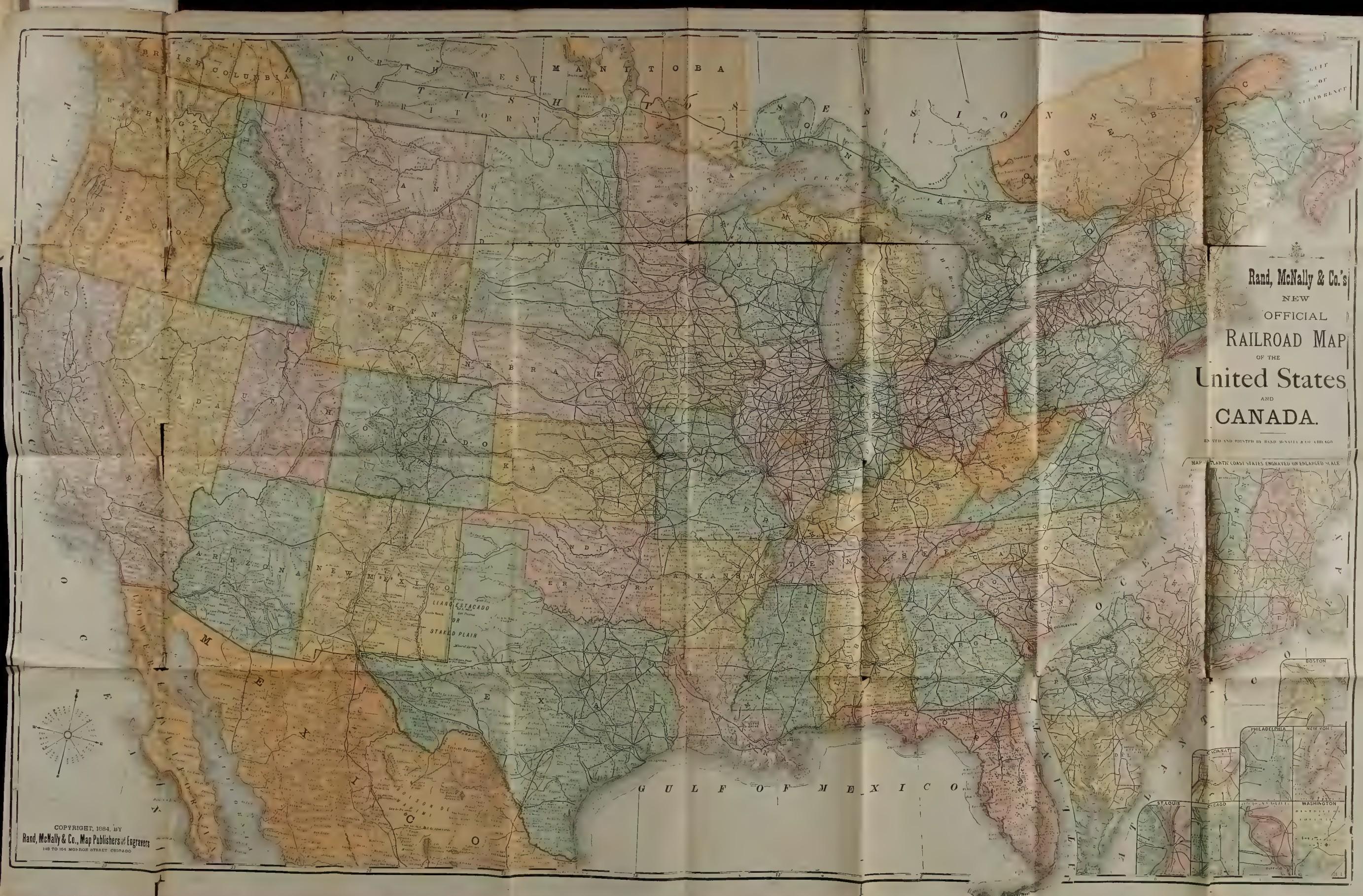
LAKE SCENERY,
NORTHERN ONTARIO.

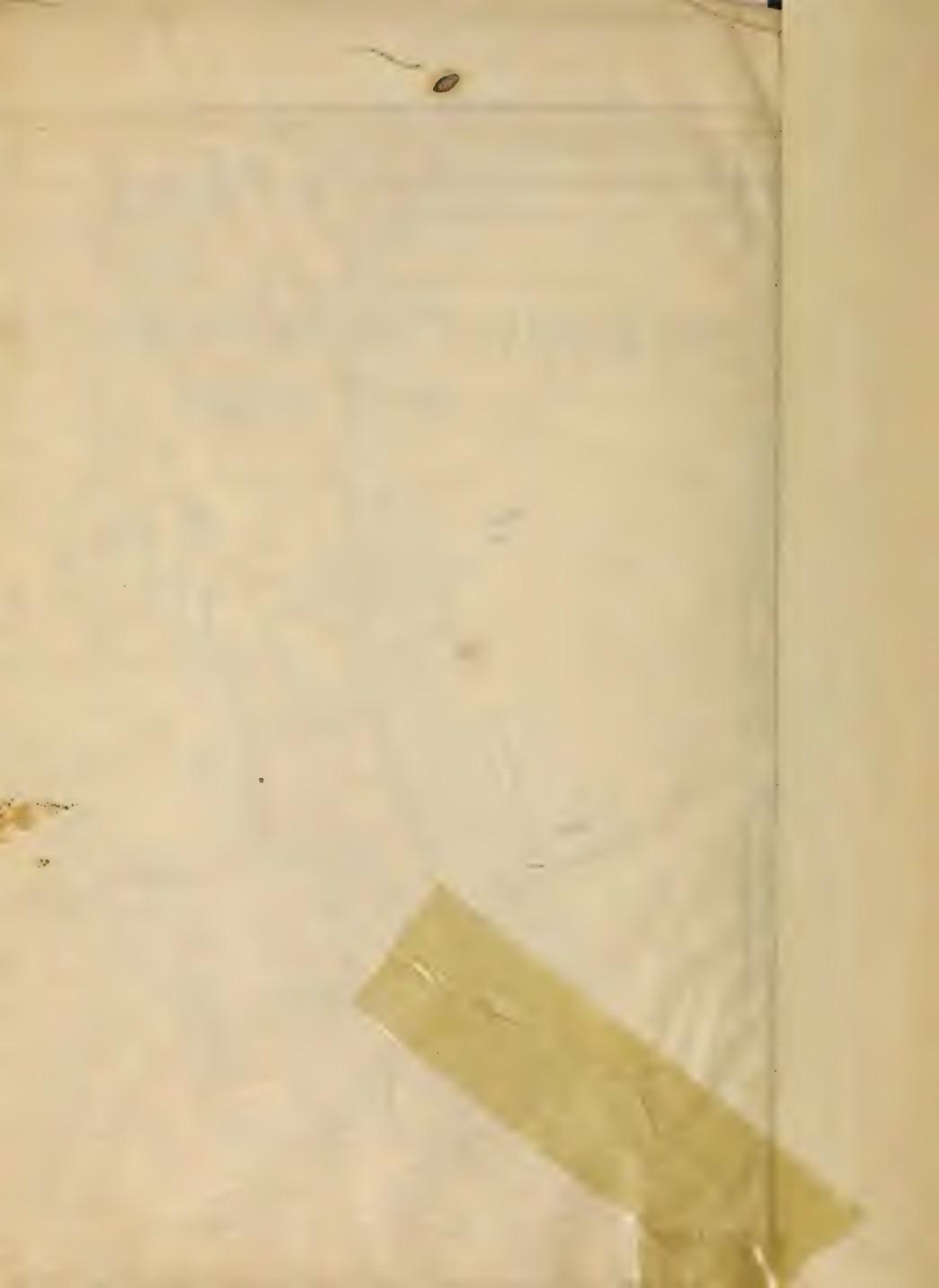
THE PROVINCE OF ONTARIO

one million acres of rich soil; the valley of the Wabigoon River with an area of 384,000 acres ; besides other sections of lesser extent or continuity. Of these districts a more detailed description will be found in the chapter devoted to Northern Ontario. In like manner will be found information concerning resources of the forest and the mine which belong to the country under consideration,—resources so extensive that their development, now only just begun, is bound in the near future to add enormously to the wealth and commercial importance of the Province.



UNIVERSITY OF TORONTO.





The Climate of Ontario

HE popular idea of the climate of Canada, not only in Great Britain but in the United States as well, is that ice and snow are its dominant features for most of the year. As a matter of fact, Canada has a very varied climate, as may well be imagined from its great extent and different topographical conditions. It is free from the enervating influence of more southerly climates, and may truthfully be said that, taken as a whole, no country is better suited to be the home of vigorous and energetic manhood and womanhood.

The Province of Ontario extends farther south than any other province of the Dominion, namely, to the latitude of Constantinople, while its northern boundary is on James Bay, a southerly extension of Hudson Bay. Through the months June, July, August and September fairly hot weather prevails.

The winter climate of southern Ontario is only moderately cold. Here the great lakes temper both the summer heat and the winter cold. At the same time, while they render the winter less severe, the atmosphere is more humid than in regions that are beyond their influence. In this section there is seldom any real winter weather until near Christmas, and by the end of March or the beginning of April spring begins to put in its appearance.

As one proceeds northward the winters gradually become colder, and the summers more temperate. In the Ottawa and Upper St. Lawrence valleys winter is moderately cold, but very exhilarating, and has the advantage of being steadier than in the lake region. The snowfall, too, is slightly heavier.

In northern Ontario, where the altitude is higher, the winters are longer and colder, the maximum degree of cold being on the north shore of Lake Superior. When once the great divide is crossed, and the land surface begins to slope towards Hudson Bay, the climate starts to moderate again, until on the shore of that sea, winter is said to be quite temperate.

THE CLIMATE OF ONTARIO

The annual precipitation varies in different parts of Ontario from thirty to forty inches ; the average rain and snow fall being : Rainfall and Sunshine. rain, 25.28 inches on 81 days ; snow, 64.6 inches on 34 days—10 inches of snow being equivalent to one inch of rain

The average number of hours of bright sunshine for the Province is 2,000 out of a possible 4,363 hours.

MONTHLY AVERAGES OF TEMPERATURES FOR EIGHTEEN YEARS AT TEN POINTS IN ONTARIO.

	Saugeen.	Birnam.	London.	Wood-stock.	Stony Creek.	Toronto.	Lindsay.	Graeven-hurst.	Ottawa.	Rockliffe.
January.	0	0	0	0	0	0	0	0	0	0
Monthly mean...	20.3	20.3	21.8	20.4	22.7	21.5	15.3	14.3	10.7	6.2
February.										
Monthly mean ...	19.4	20.6	21.8	21.2	23.8	21.9	16.4	15.7	13.0	8.9
March.										
Monthly mean ...	25.3	27.1	28.6	27.3	30.7	28.0	23.7	22.9	22.7	19.2
April.										
Monthly mean ...	39.5	43.4	44.6	42.9	44.9	41.9	40.5	39.2	40.9	37.7
May.										
Monthly mean ...	50.3	54.7	56.3	54.2	54.9	52.9	53.3	52.6	55.5	51.8
June.										
Monthly mean ...	60.7	65.0	66.5	65.1	66.7	63.8	63.9	63.4	65.7	61.8
July.										
Monthly mean ...	64.5	68.2	69.8	68.2	71.2	67.9	66.9	66.8	68.4	64.7
August.										
Monthly mean ...	66.0	65.7	67.0	65.4	69.6	66.0	64.4	64.1	65.6	61.2
September.										
Monthly mean ...	57.4	60.4	60.6	58.9	62.1	59.2	56.8	57.0	57.6	53.4
October.										
Monthly mean ...	46.1	48.2	47.8	46.6	49.5	47.4	44.2	45.0	44.6	41.6
November.										
Monthly mean ...	35.7	36.7	36.9	35.8	39.4	37.0	32.9	33.2	32.1	29.1
December.										
Monthly mean ...	27.0	26.7	27.6	26.2	30.5	27.8	22.0	22.3	17.8	15.0
ANNUAL MEAN ...	42.68	44.75	45.77	44.35	47.17	44.61	41.69	41.37	41.22	37.55

THE CLIMATE OF ONTARIO

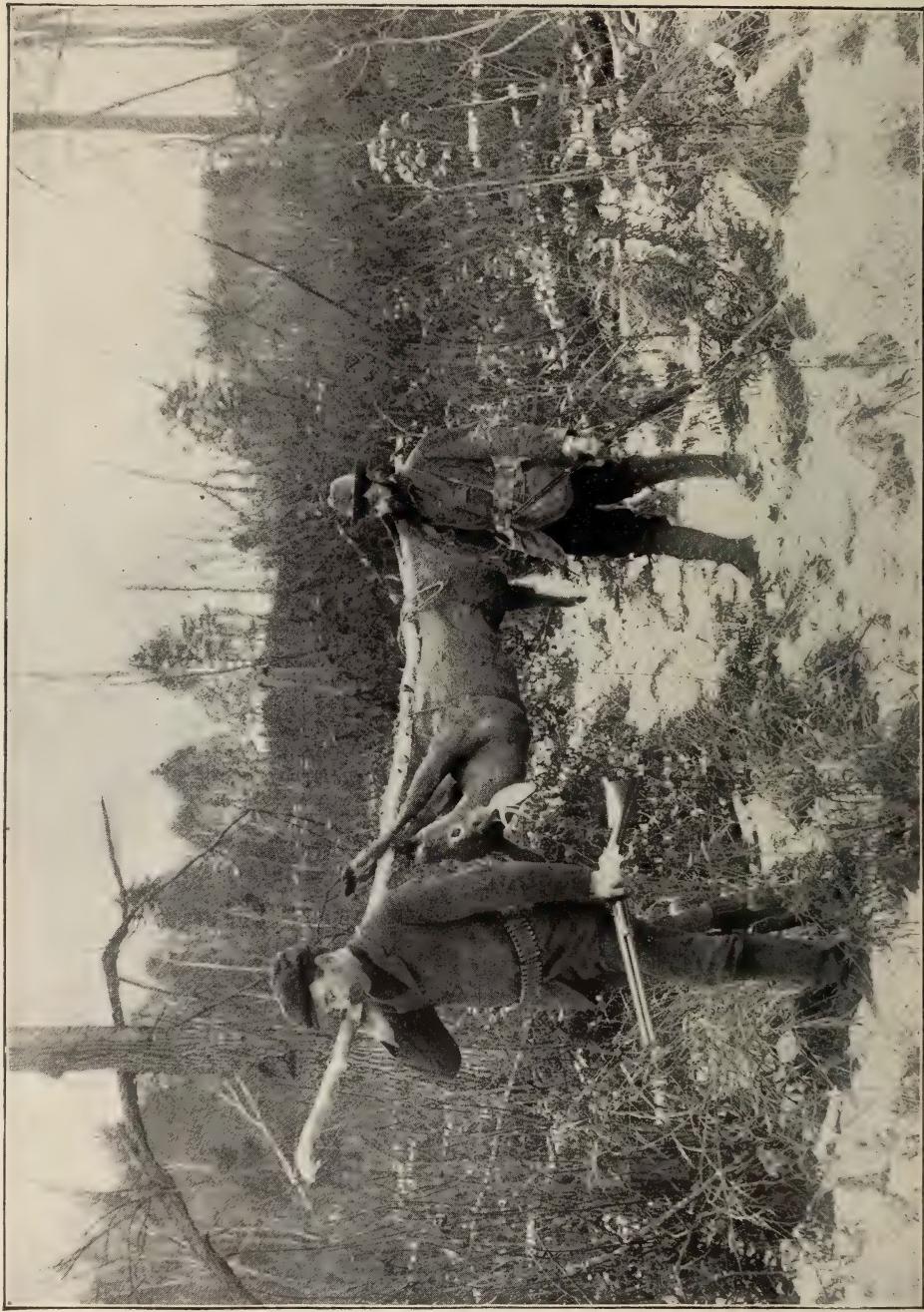
STATEMENT OF THE TORONTO OBSERVATORY FOR THE SEVEN YEARS,
1893—1899.

Latitude 43° 39.4' N., and Longitude 5h. 17m. 34.65 s. W. Height above the sea 350 feet.

	1899.	1898.	1897.	1896.	1895.	1894.	1893.
Average temperature.....	45.83	47.15	45.93	45.36	44.28	46.75	43.53
Highest temperature ...	92.1	97.1	93.3	91.3	93.4	90.7	93.3
Lowest temperature....	—12.0	—15.0	—7.2	—17.9	—21.2	—9.9	—17.8
Average humidity of the air.....	76	76	76	75	75	76	77
Resultant direction of the wind.	S 77 W	N 65 W	N 89 W	N 88 W	S 78 W	N 78 W	N 66 W
Average velocity (miles per hour).....	10.14	10.12	12.33	8.44	5.60	5.67	8.59
Highest velocity in month and year.	50.9	55.0	51.0	50.0	60.0	58.0	60.0
Total amount of rain in inches	25.795	23.800	27.737	21.770	22.532	25.785	31.145
Number of days of rain,	105	98	110	104	101	114	105
Total amount of snow in inches	31.8	71.3	47.4	73.3	54.8	37.8	85.7
Number of days of snow	40	53	43	43	48	32	64
Number of fair days	185	196	173	174	196	179	156
Number of days completely clouded	44	56	58	55	48	43	50
Number of thunderstorms.	29	34	19	25	23	36	41
Number of fogs.....	31	26	28	30	33	30	31
Number of hours of bright sunshine.	2148.0	2128.9	1987.6	2146.7	2159.7	2017.7	2052.4
Number of hours of possible sunshine.....	4463.3	4463.3	4463.3	4474.4	4463.3	4463.3	4463.3

Courtesy of Grand Trunk Railway System.

AFTER THE DAY'S HUNT.



Tourist Attractions in Ontario

PRINCIPAL TOURIST ROUTES SUMMER RESORTS ATTRACTI0NS FOR SPORTSMEN

(O) NTARIO—"a pleasant prospect of lakes and woodland," which the word in the Indian language implies,—is aptly named. It is a land of lakes and rivers—rivers that have their source in the northern forests, and flow now swift, now peaceful, till they join the vast inland seas, Superior, Huron, Erie, Ontario, whose waters are in turn borne by the broad St. Lawrence to the ocean. Of beauty and variety of scene, therefore, Ontario has much to entice the footsteps of the traveller, while the invigorating qualities of its northern climate make it especially beneficial to those who reside farther south and desire to escape from the enervating influences of a southern summer.

The tourist starts as a rule with Niagara Falls, partly because of its celebrated beauties, and also because usually it lies directly in the path of travel. After viewing this attraction and the magnificent Niagara River, his course will probably be across Lake Ontario, a distance of 45 miles, to the City of Toronto, the Provincial Capital. Toronto is a convenient centre, for from thence he may proceed East, West or North, as inclination directs.

The Thousand Islands. The eastern route is preferably by boat along the north shore of Lake Ontario, past Port Hope, Trenton, Belleville, Picton and Kingston, all pleasant summer resorts, to the River St. Lawrence. Here the famous archipelago of the "Thousand Island" is entered. For fifty miles the vessel picks its way among these charming islands, where with every new water stretch a fresh vista opens to the view, each more beautiful than the last. That this is a famous summering place is at once apparent from the homes that have been built either among the pine trees, or perched on rocky bluffs, or half hidden in the beautiful bays.

TOURIST ATTRACTIONS IN ONTARIO



WATCHING FOR THE BOAT,
Muskoka Lake District.

Courtesy of Grand Trunk Railway System.

Soon after passing the town of Brockville, the vessel enters the first of a long series of rapids. The passage by steamship through the churning, foaming breakers is certainly a most novel experience; but there is little danger under the guidance of the competent pilot. The last of the series of rapids is the far-famed Lachine, which is the finest of all.

After the passage of the rapids is made, the City of Montreal is soon reached, which at the present time is the head of ocean navigation.

From Lachine, a pleasant trip may be made up the Ottawa River, which forms the boundary between Ontario and Quebec, to the City of Ottawa.

Tourist Attractions in Ontario

It is to St. Anne, just above the Lachine rapids, that Moore refers in his beautiful "Canadian Boat Song:"

" Faintly as tolls the evening chime
Our voices keep tune and our oars keep time.
Soon as the woods on shore look dim,
We'll sing at St. Anne's our parting hymn.
Row, brothers, row, the stream runs fast,
The Rapids are near and the daylight's past."

The Ottawa River. The Ottawa is a majestic stream, one of the most beautiful of the Dominion, and the sail is truly delightful. Ottawa, the capital of the Dominion, is a most attractive point. The magnificent Government buildings situated upon a high bluff overlooking the river, the Chaudiere Falls, the immense lumber business, are all extremely interesting features, and make a day spent rambling about the capital a very pleasing experience.

The Upper Lakes. The route through the Upper Lakes is a very popular one and undertaken annually by a large number of tourists. There are

several well-equipped lines of steamers available and the traveller may embark either at Owen Sound, Collingwood or Windsor, for a stimulating and refreshing trip of two or three days duration which closely resembles an ocean voyage. The route lies through Lake Huron, past Great Manitoulin Island to Sault Ste. Marie, and the monotony of the expanse of water is continually relieved by the panorama of the coast. At the rapids which occur at this point, named Sault Ste. Marie by the French voyageurs almost three centuries ago, magnificent locks have been constructed on both the Canadian and American sides, by means of which steamers are lifted to the level of Lake Superior. The immense water power afforded at this point is now being utilized in great industrial undertakings which promise to make Sault Ste. Marie a very important manufacturing centre.

Leaving Sault Ste. Marie for Fort William, the steamships take their course directly across the widest part of Lake Superior — which is far more like the sea than a fresh water lake — and in less than twenty hours come within sight of the rocky bluff of Isle Royale and the tremendous purple promontory of Thunder Cape — "The Giant Asleep." This turreted headland shelters the large indentation of Thunder Bay and affords a grand harbour which has been taken advantage of to form the principal ports upon

TOURIST ATTRACTIONS IN ONTARIO



LAKE OF BAYS,
Parry Sound District.

Courtesy of Grand Trunk Railway System.

the north shore of the lake—Port Arthur and Fort William. Here the tourist will find good hotel accommodation, and if he cares to stop over, he can go by rail to Nepigon river, 65 miles east, to which celebrated resort for trout fishermen this lake tour forms an excellent means of access.

The attractions of Northern Ontario are unequalled for those who desire to spend the summer months on the lakes or in the woods, under canvas by the camp fire, or in the summer cottage or hotel. For the weary, over-worked toiler of the city the healing sunshine and pure northern air of this region will work wonders. Here is Ontario's fairyland —a land of thousands of lakes and streams and myriads of islands.

Among the best known resorts of the north, frequented by Americans and Canadians alike, may be mentioned the Muskoka lake region and the Georgian Bay. The Muskoka lakes are situated about one hundred miles

TOURIST ATTRACTIONS IN ONTARIO



AN EARLY MORNING
SHOT.

Courtesy of Grand Trunk Railway System.

north of Toronto and are much frequented by the people of that city. Summer cottages have been built on the islands of these lakes, where an unconventional out-of-door life with all the attractions of good boating, bathing, fishing and pleasant society may be enjoyed.

The islands of the Georgian Bay, Lake Huron, thirty thousand in number, are equally attractive. The trip by steamer through the intricate channels of this region is one of the most beautiful that can be indulged in anywhere.

Nowhere in Ontario will there be found scenery more imposing than that of the upper Ottawa River. This river forms the drainage basin of thousands of miles of virgin forest, and it seems to carry with it much of the power and grandeur of the far northland where it has its source. The Ottawa is one of the water highways of the lumbering industry and many millions of logs and square timber are yearly floated down its current to be

TOURIST ATTRACTIONS IN ONTARIO

sawn and marketed. Here the typical French-Canadian lumbermen may be met with voyaging in their flat-bottomed boats, breaking up the log-jams, or running the rapids.

If the traveller has the explorer's instinct and wishes to see the forest as it looked when only the red man held sway, he should take a canoe and an Indian guide and camping outfit from Lake Temiskaming and follow one of the rivers that are tributary to the Ottawa till he reaches Lake Temagami. There he will find himself in a land where neither the settler nor the lumberman has penetrated. Its woods are the home of the moose, the caribou, the deer and the bear, and its waters are still sacred to the trout, the bass, the doré and other game fish.

Attractions for Sportsmen.

To the sportsman, Ontario's northland will readily appeal, affording him as it does opportunities that are almost unequalled in these days for securing big game. An area of

Forest Reserve.

1,400,000 acres in this country including Lakes Temagami, Lady Evelyn, Rabbit, Obabika, and others, has recently been withdrawn from settlement and constituted a timber reserve under the Forest Reserves Act. Hence this large tract will remain a wilderness and a perpetual resort for the tourist and sportsman.

In the more accessible regions of Muskoka Parry Sound and Haliburton, the red deer is very plentiful, while the moose is quite common. Both may be hunted in season on procuring a license from the Provincial Government for a small fee.

In the Parry Sound District the Ontario Government, with commendable foresight, has set apart as a game reserve a block containing one million one hundred thousand acres of forest land known as Algonkin National Park. No shooting is allowed within its limits, so that it forms a refuge and breeding ground for game of all descriptions ; fishing, however, is permitted.

The finest fishing may be had in the northern rivers. Nearly all the streams emptying into Lake Superior contain large speckled trout in abundance. For these the Nepigon river is worthily famous and is much frequented by anglers. For those who love the sport, no finer outing can be had anywhere than a week's fishing on this magnificent stream.

Political Institutions

SYSTEM OF GOVERNMENT SYSTEM OF EDUCATION

(1) ONTARIO has a very fine system of central government, with an elective Legislature and Cabinet Council responsible thereto, comprising the departmental heads. Every Minister is a member of the Legislature. The subjects that fall within the legislative authority of the provincial government are very numerous and affect immediately every man, woman and child in the province. Comfort and convenience, liberty and life, all the rights of citizens with respect to property, the endless matters that daily affect a community, are under the control of the provincial authorities.

The legislative powers of the province relate to the management and sale of public lands and the timber and minerals thereon ; administration of justice in the province ; property and the raising of revenue for provincial purposes ; the establishment, maintenance and management of prisons, hospitals, asylums, charities, etc. ; tavern licenses, local works and undertakings and generally all matters of a merely local nature.

The care of lunatics and idiots is, in Ontario, undertaken by the Provincial Government, a burden which, in most countries, falls entirely or mainly on the municipalities. All these institutions are well equipped, and conducted on the most approved principles. There are six asylums for the insane in Ontario, located at Toronto, London, Kingston, Hamilton, Mimico, and Brockville, besides an asylum for idiots at Orillia.

The Provincial Government also maintains a reformatory for boys at Penetanguishene, and an institution for the deaf and dumb at Belleville, and one for the blind at Brantford, besides a reformatory for women and refuge for girls at Toronto. In addition to this about \$220,000 is spent annually in giving aid to hospitals and charities, and for the care and protection of neglected children.

There is no tax whatever upon the people of Ontario for the maintenance of the provincial government, the revenue being derived from the sale of Crown lands, timber and minerals, from liquor licenses and other fees, supplemented by a subsidy from the government of the Dominion.

POLITICAL INSTITUTIONS

Ontario also possesses a very complete system of municipal self-government. Under this system the province is divided into city, town, township, and village municipalities. Each municipality annually elects a council to transact its business. The only direct taxes that the people of Ontario are called upon to pay are those imposed by the municipality. Municipal taxation, especially in rural districts, is, as a rule, quite moderate.

The Ontario system of education combines the best features of the systems of Great Britain, Germany and the United States, upon which it has been founded; and for completeness and excellence is probably **Education.** unexcelled in any country. The complete system includes the Kindergarten, the Public or Common School, the High School and the University.

Education is practically free, attendance is compulsory, and the schools are national instead of sectarian. No class or sect is favored. The highest distinctions of the University are most frequently gained by the sons- and daughters too—of working men. The poorest boy or the poorest girl may reach by his or her own efforts the topmost rung of the ladder.

The work is presided over by a Department of the Government with a Minister at its head, who has a seat in the Legislature and is a member of the Cabinet. There are in all about 9,000 teachers, male and female, in the different grades of schools, while the number of scholars is about 500,000. The province is divided into counties, which are sub-divided into townships and these again into school sections. In the centre of each school section there is a public school, which is presided over by the rate-payers of the section. These schools number upwards of 5,400. Though the Province of Ontario is generally Protestant, there is still a Roman Catholic minority. In order to meet the demands of this church for combined secular and religious instruction, what is known as the separate school has been established, to which persons of that religion may send their children if they so desire. There are 250 Separate Schools in the Province. After going through the course of instruction in the Public School, as laid down by the Education Department, the pupil is ready for the High School. Every town or village of importance has one of these institutions. They form the connecting link between the common schools and the University, as the course of study culminates where that of the University begins.

POLITICAL INSTITUTIONS

There are several good Universities in Ontario, the principal being the University of Toronto, a teaching university with which are affiliated the following Arts institutions, namely, University College (Provincial), Victoria College (Methodist), the Ontario Agricultural College, School of Practical Science, two Medical and a Dental College, and two Colleges of Music, etc. This University was founded in 1827. It has an endowment of over a million dollars, and an income of \$85,000. Its students, male and female, number about 2,000. It also is undenominational.

The following universities have been established by various denominations :—

Ottawa University (Roman Catholic), Queen's University (Presbyterian), Trinity University (Episcopalian), The Western University (Episcopalian), Victoria University (Methodist), now federated with Toronto, and McMaster University (Baptist)

In addition to the above, a number of private and endowed schools and colleges are to be found throughout the Province for the students of both sexes, some of which are of a denominational character. Among these the Upper Canada College is well known. There is also a school of Technology, and a school of Art and Design, located in Toronto; a college of agriculture; two schools of Mining and three schools of Dairying.

The Kaminitquia River.

ON THE LINE OF THE
PORT ARTHUR & RAINY RIVER RAILWAY.



Transportation

RAIL AND WATERWAYS

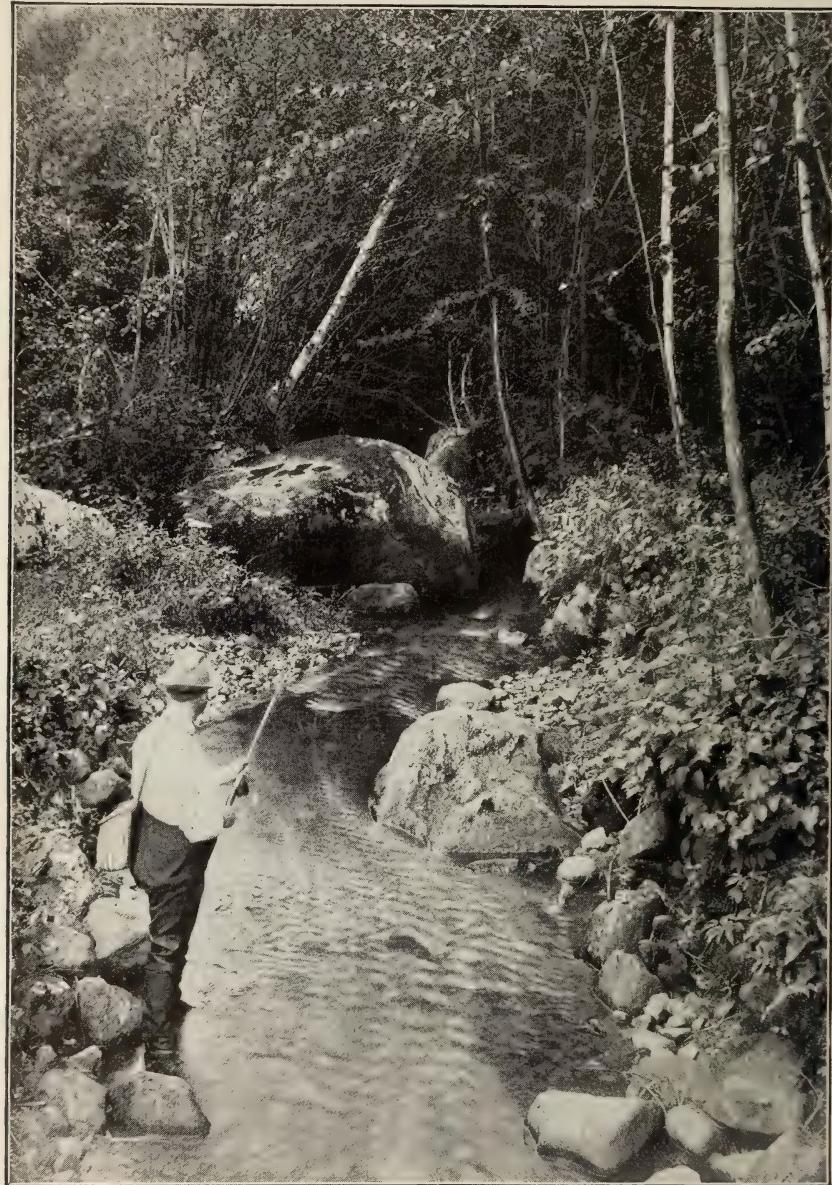
(1) ONTARIO has nearly 8,000 miles of steam railways. In this regard the southern portion of the province is particularly well supplied, being covered with a network of lines. These, in connection with the lake, river and canal navigation systems, afford exceptional facilities for internal communication. Residents in the settled portion of Ontario are in nearly all cases within easy access of a railroad and there are but few localities in which the farmer cannot reach a station with a load of produce and return to his home on the same day. The principal railway systems are the Grand Trunk and the Canadian Pacific, two splendidly equipped roads with fine road-beds and rolling stock. These systems are not confined to Canada, but their ramifications extend to the United States as well.

A third system, not so well known as the above, but one that seems likely to play a very important part in the development of the country immediately north of the older settled portion of the province is the Ottawa, Arnprior and Parry Sound Railway. The route of this road runs for 264 miles directly across the province from the city of Ottawa, in the East, to Parry Sound, a port of the Georgian Bay, in the West, and parallels the main lines of the Canadian Pacific and Grand Trunk to the South. It connects, via the Canada Atlantic, with Montreal, Quebec, St. John and Halifax; and with Boston, Portland and New York by American roads. It forms a short cut across Ontario from the Great Lakes and is thus a very direct route to tidal waters.

Other important roads in course of construction are the Algoma Central from Sault Ste. Marie to Hudson Bay and the Ontario and Rainy River Railway—a section of the Canada Northern. Each of these roads will open up a large field for development in newer portions of the province.

The growth of the electric railway in Ontario within the past few years has been rapid and continuous. In the cities and more important towns

Electric Railroads. the electric car has completely taken the place of the horse car for passenger traffic. Not only so, but the system is rapidly extending itself into the rural districts, where it affords light or secondary railway facilities for the speedy transportation of passengers.



HAUNT OF THE BROOK TROUT.

Courtesy of Grand Trunk Railway System.
[32]

TRANSPORTATION

gers, farm produce and general light freight, and bids fair in the near future to add greatly to the wealth and prosperity of the Province.

As has already been pointed out, the Great Lakes and the St Lawrence River form the greatest system of inland waterways in the world. There is, however, a difference of level between Lake Superior and the tide-waters amounting to 602 feet, giving rise to rapids between Lakes Superior and Huron, to the celebrated falls of the Niagara River between Lakes Erie and Ontario, and to the rapids of the St Lawrence. To overcome these obstacles to navigation, a fine series of canals has been constructed, fifty-one miles in extent, at a total cost of about fifty millions of dollars, as follows :

Inland Navigation. the Welland system, connecting Lake Erie with Lake Ontario, twenty-three and three-quarter miles ; the St Lawrence system, twenty-four miles ; and the Sault Ste. Marie canal, three quarters of a mile. By this means a continuous stretch of inland water communication is afforded through Lakes Superior, Huron, St. Clair, Erie and Ontario and the River St. Lawrence to the Atlantic, a distance from Port Arthur of 2,260 statute miles. Under the present scheme of enlargement now almost completed, these canals will accommodate vessels of 14 foot draught throughout their entire course. The principal traffic of the route consists of grain and lumber. There are also several internal canal systems.



3 RURAL ELECTRIC-CAR SERVICE.



COWS IN PASTURE :
An Ontario Farm Scene.

Ontario's Agricultural Development

SOUTHERN ONTARIO is pre-eminently an agricultural country. Its soil and climate are in all respects such as are required to produce the best results both from the growing of cereal crops and the raising of live stock. One is not surprised therefore to find that the majority of the people of Ontario are engaged in farming as a means of obtaining a livelihood. When one considers the magnitude of the industry, the amount of capital there is invested in it, and the value of the annual output of the farms of Ontario, it becomes apparent, that agriculture is paramount in point of importance. Statistics show that there are twelve and a half million acres of land under cultivation and that there is invested in lands, implements, buildings and stock, no less a sum than a thousand millions of dollars, which is a far larger sum than lies invested in the manufacturing industries of the whole Dominion.

It is difficult to determine the annual value of the products of the farm in Ontario, but the following figures at current market prices are probably within the mark :

Field products	\$100,000,000
Live stock increase	35,000,000
Dairy produce	35,000,000
Orchard and garden products	12,000,000
Farm woodland products	20,000,000
Pasture	4,500,000
Eggs, wool, honey, etc., etc.....	3,500,000
Total	\$200,000,000

The tendency of agriculture in Ontario to-day is to become specialized. Its farmers as a rule can no longer compete with the West in the growing of grain crops at the present range of prices, even though it is admitted that as good a sample and as high an average yield can be obtained in this Province as in any part of North America. The economic con-

ONTARIO'S AGRICULTURAL DEVELOPMENT

ditions in which the farmer is placed demand that he shall turn his raw material into a finished product. Consequently he is now feeding his coarse grain to live stock instead of selling it in the markets ; is producing butter and cheese, meat, poultry and fruit for the British Market, and breeding high class stock to replenish the herds and flocks of the United States as well as other parts of the Dominion. Not only does he thereby receive a better cash return, but he also maintains and increases the productiveness of his land, by restoring to it that which is taken from it.

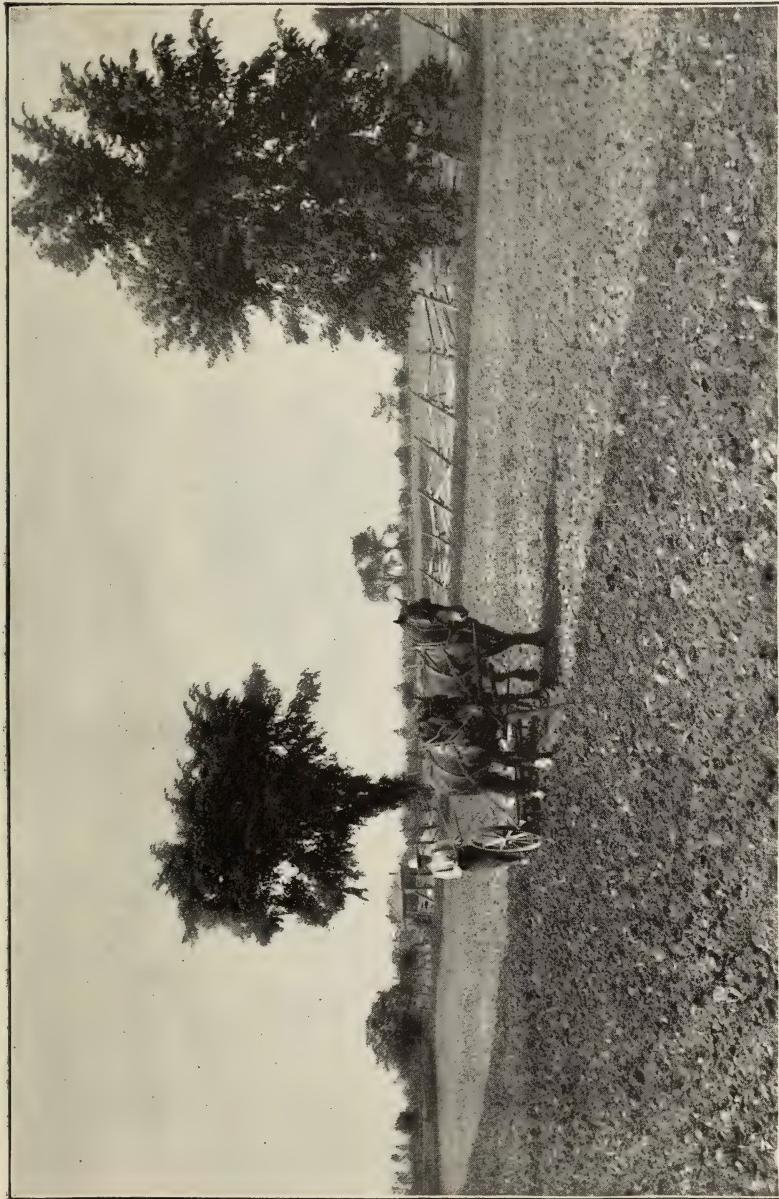
The breeding and feeding of stock is a highly important branch of Ontario agriculture, and is regarded as the key to successful farming. Ontario is particularly well suited for the stock raising industry. Its

Stock Raising. invigorating climate and abundance of pure water, the nutritive qualities of its roots and grasses and its remarkable freedom from disease especially fit it for the raising of the finest of cattle. Pure bred animals from its studs, herds and flocks, have been shipped to the United States for many years past and have taken a high place in that country. In addition to this, Ontario supplies large numbers of pure bred animals to the sister Provinces of Manitoba, the North West and British Columbia, and it may justly claim to be the greatest breeding ground in North America for animals of this description. Nearly all the breeds of cattle prominent in Great Britain are represented.

During the past three years, Ontario's export trade in live stock with the United States has grown in a very marked manner. At the present time in all classes of live stock including horses, the demand is excellent and prices satisfactory.

The feeding of beef cattle for the home and British market is a special line on many farms. A system of public abattoirs is about to be inaugurated through Provincial encouragement and support, and there is no doubt that, with an extended system of refrigeration, this trade will be greatly increased.

Ontario has been pronounced to be the ideal home of the combing wool sheep. Perhaps in no country are sheep liable to so few diseases, and all the leading breeds do well. The climate is as near an ideal one **Sheep.** for the successful raising of this class of stock as can be found anywhere. United States flockmasters look to Canada for breeding stock, knowing that sheep raised on our soil have, similarly with cattle, the stamina and quality necessary to improve their flocks when fresh blood is



HARROWING :
An Ontario Farm Scene.

ONTARIO'S AGRICULTURAL DEVELOPMENT

required. The excellence of Ontario's flocks was amply demonstrated at the Columbian Exposition at Chicago, where in nine classes Ontario secured 241 awards with 352 animals against 191 awards with 478 animals for the whole United States, a result which in face of the fine display made may well be considered a remarkable one, and greatly added to Ontario's reputation as a sheep breeding country.

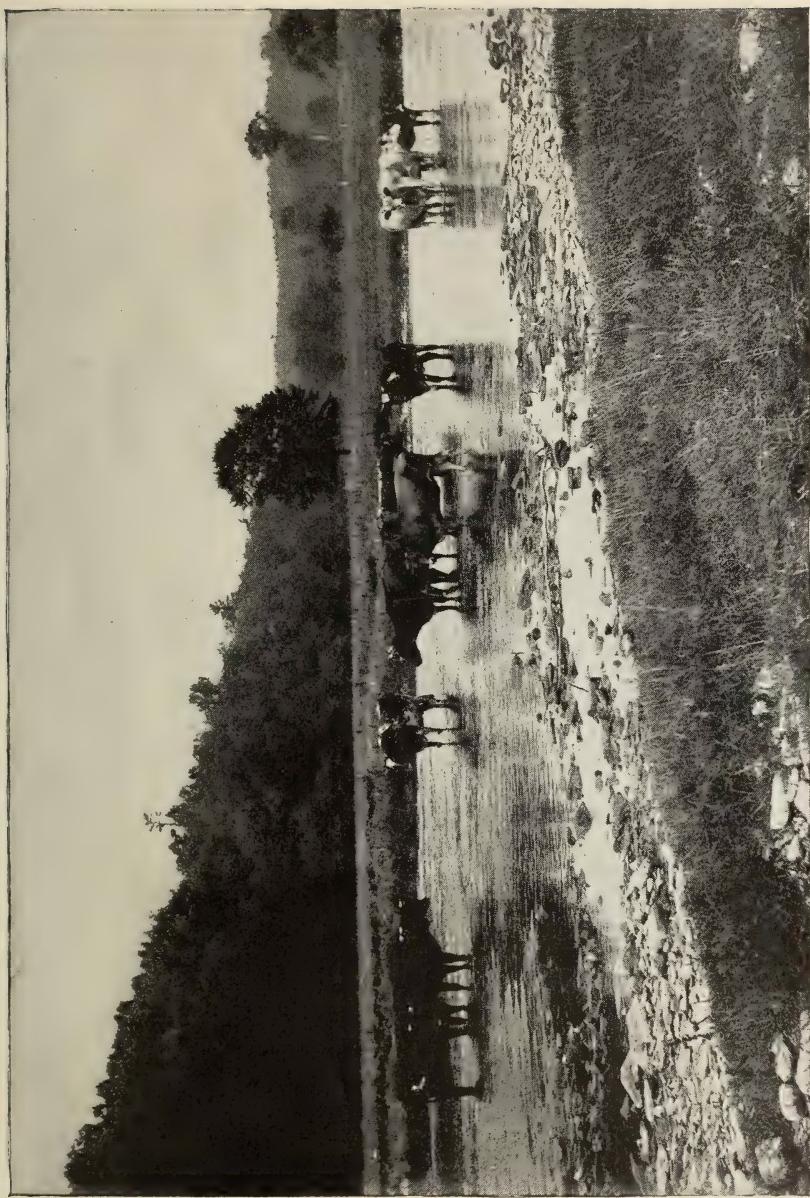
The number and value of cattle, sheep and swine on hand in Ontario on July 1st, 1899, was as follows :

	No.	Value.
Cattle	2,319,000	\$53,000,000
Sheep	1,772,604	7,315,729
Swine	2,000,000	10,181,000

Ontario is noted for the production of a fine class of horses. During the Boer war, a considerable number were purchased in the Province for army purposes. They were pronounced to be unusually sound **Horses.** in wind, rejections on this score not exceeding two per cent. At the front they made an excellent showing for stamina and intelligence, and their powers of endurance were notably superior to all others except perhaps the native ponies.

In conjunction especially with dairying, the bacon hog industry has rapidly come to the front as one of the most profitable branches of Ontario agriculture. The by-products of the dairy are now largely used as food for pigs, and great numbers can be raised at a minimum of cost and sold at paying prices.

The success of Canadian bacon and hams in the British market is largely due to the fact that the quality of our hogs is superior to that of the corn fed hog of the Western States. By the opening up of pork-packing and bacon-curing establishments in Ontario a steady market for light young hogs is assured all the year around. These are located at Toronto, Hamilton, Ingersoll, Brantford, London, Stratford, Peterboro, Collingwood, and Palmerston. The yearly output for Toronto alone is estimated at \$3,000,000. Immense strides have been made in the hog-raising and bacon-curing industries within the past ten years. In 1890, the value of the exports of Canada in this line of production amounted to only \$646,000, whereas in 1899 it had reached ten and a half million dollars.



IN THE HEAT OF THE DAY.

ONTARIO'S AGRICULTURAL DEVELOPMENT

The business of poultry-raising is undergoing great development at the present time, and is capable of much wider expansion. Turkeys have been shipped to England for years, and considerable shipments of Poultry. Chickens are now being made. The export trade in eggs is also considerable.

Dairying is one of the foremost branches of Ontario agriculture. Ontario exports more cheese than the whole of the United States, and on the British market the quality of the product is admittedly superior. Entering late into the race when it seemed almost won by the United States, Canada has wrested from that country the first place on the market by Dairying. the superiority of its product. Much of the cheese consumed by the British public is made in Ontario, although doubtless sometimes sold to the consumer as the home article. At the World's Columbian Exposition, Ontario cheese swept all before it, taking a total of 261 awards, and in many cases securing 99 out of a possible 100 points. In this department Ontario and Quebec combined captured practically all the awards, leaving but a small portion to the rest of the American continent. No other recommendation is needed.

Ontario cheese is made under the factory or co-operative system and not in the homes of the farmers. The cheese makers managing Cheese Factories. these factories have for the most part received their training in Government Dairy Schools. By these methods a superior and uniform product is secured.

The development of the cheese industry in Ontario has been remarkably continuous and rapid. In 1864 the first factory was erected. Prior to that time about 3,500,000 lbs. were made annually in the farm dairies. Since then the growth has been as follows :—

1871—	Amount made in factories	12,500,000 lbs.
1881—	"	35,000,000 "
1891—	"	81,924,042 "
1895—	"	109,230,340 "
1899—	"	123,324,000 "

The value of the product of the factories for 1899 was \$12,121,000. The year 1900 shows still greater strides, being the greatest that the cheese trade of the Province has ever experienced.

The amount of Canadian cheese, of which probably two-thirds comes from Ontario, exported to Great Britain in 1895 was 117,230,048 lbs.,

Black Creek,
Ontario.

AN UP-TO-DATE
CHEESE-FACTORY AND CREAMERY.



ONTARIO'S AGRICULTURAL DEVELOPMENT

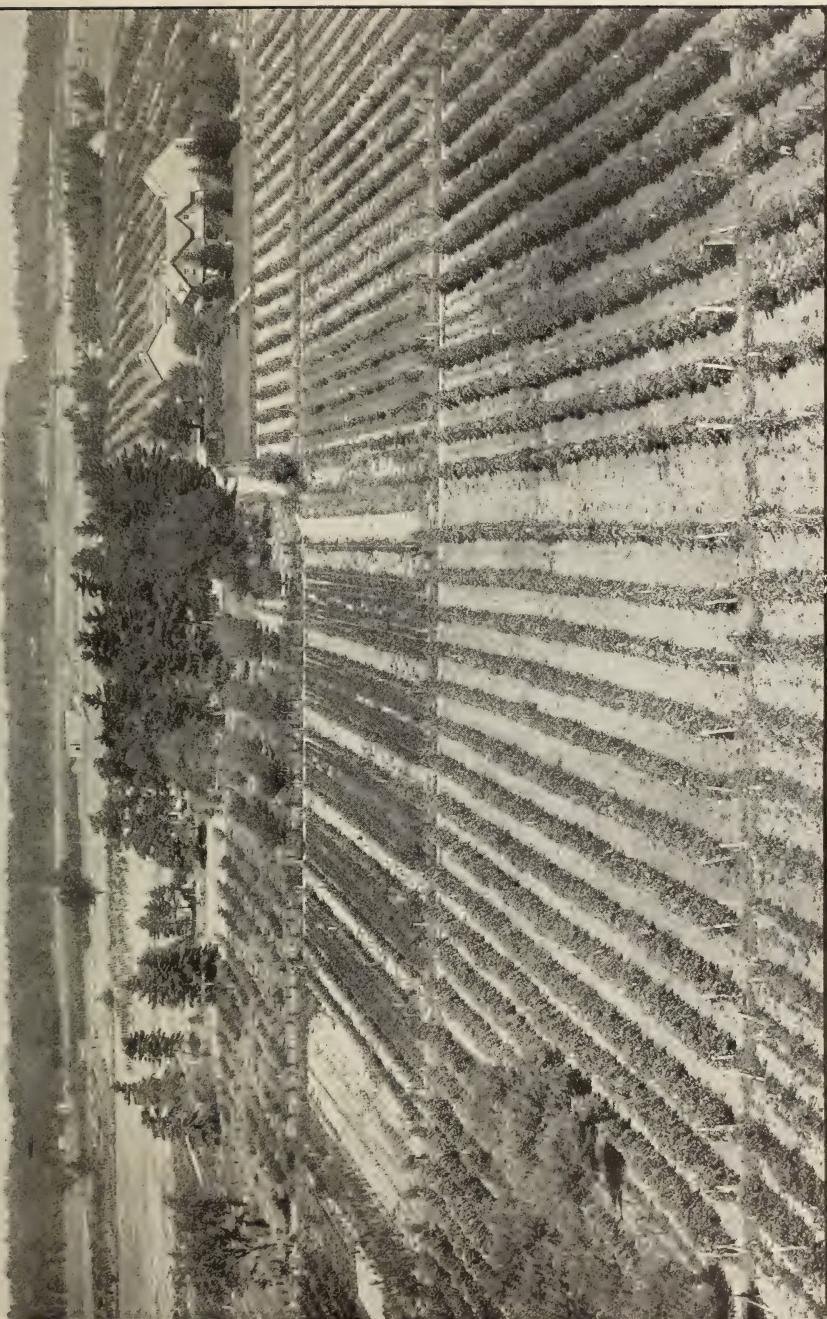
in 1896, 134,141,264 lbs., and in 1898, 196,221,000 lbs. valued at \$17,423,000.

The butter industry is not so far advanced as the cheese manufacture, chiefly owing to the lack of proper facilities for placing the product on the world's market in prime condition. Ontario is capable of producing as fine a quality of butter as is produced anywhere, and with the proper means of manufacture, packing and transportation, is beginning to compete successfully in the British market. The number of creameries operated in 1898 was 323, the total amount of butter produced being estimated at over 9,000,000 lbs. at an average value of 19.16 cents per pound. Many cheese factories are now making butter during the winter season, and cheese during the summer, and the number of creameries is steadily increasing. There are about one million milch cows on Ontario farms.

All the fruits usually grown in the temperate zone can be produced successfully in Ontario, and the province contains a larger area where suitable conditions of soil and climate prevail than any other province of the Dominion. For quality and flavor Ontario fruit is unsurpassed. The fruit growers now produce ample supplies for the home market, and fruit is everywhere a common article of diet and is abundant the year round. The export trade is, however, capable of much greater development.

Ontario is justly celebrated for its apples. They constitute the staple and principal fruit crop, and can be grown successfully over a very large part of the province. The farther north the apple can be produced the better is the flavor and keeping quality of the fruit. Beginning with the valley of the St. Lawrence above Brockville, a good apple country is found which extends to Niagara at the western end of Lake Ontario, a distance of 288 miles. In all the counties bordering on Lake Ontario, Erie, Apples. and Huron, and indeed in all the counties of the west, apples grow to great perfection. The orchards of the Huron tract alone will, in a favorable year, produce fully 500,000 barrels. A number of varieties of early and late apples are grown, and considerable attention is being paid to the production of good keepers for the European market, where hundreds of car loads are shipped annually.

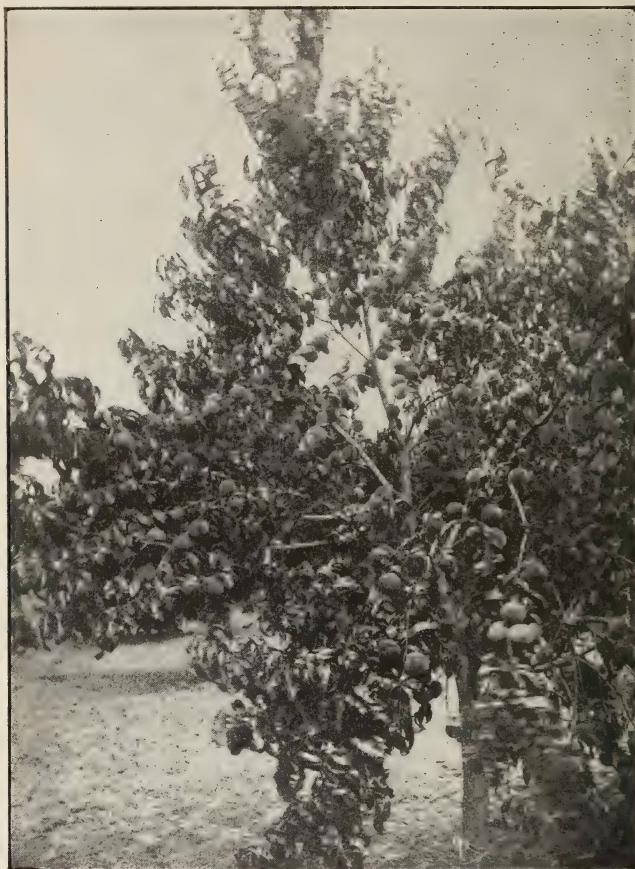
In several sections of Ontario fruit growing has become a special industry and has grown to very large proportions. This is particularly the



A FRUIT-FARM
IN THE NIAGARA DISTRICT, ONTARIO.

ONTARIO'S AGRICULTURAL DEVELOPMENT

case in the Niagara section and in the counties bordering on Lake Erie. Here the influence of the Great Lakes renders the climate milder even than



PEACH TREE IN BEARING.

in districts lying much further south, and tender fruits such as peaches and grapes grow to perfection in the open air, producing enormous yields. Vineyards and orchards varying from 10 to 100 acres in extent are seen everywhere.

Vine-yards
and Orch-
ards.

In the narrow strip of country bordering Lake Ontario from Hamilton to Niagara, pears, peaches, plums, grapes, cherries, quinces and

ONTARIO'S AGRICULTURAL DEVELOPMENT

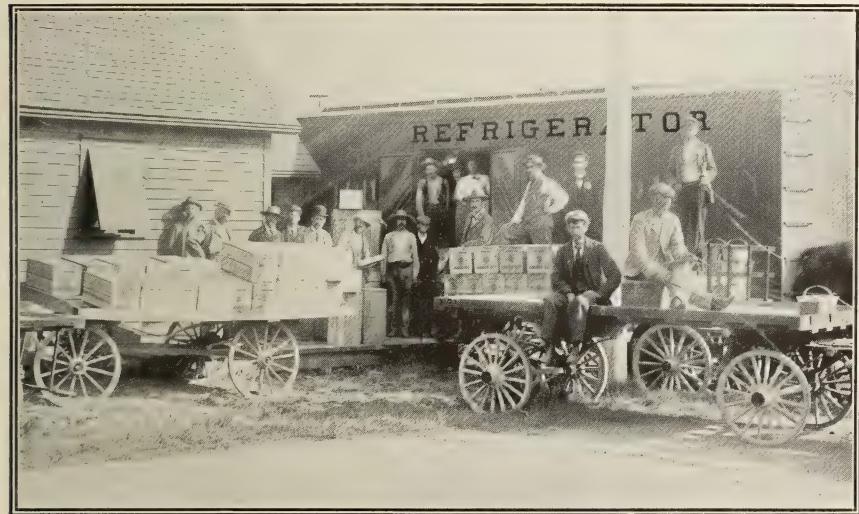
apples, and small fruits, are very extensively grown, and make this the most important fruit section of the province. From this district fruit is shipped by lake and rail to Toronto, Montreal, and other eastern points, and as far west as Manitoba, in addition to pears and apples exported.

Grapes grow prolifically in these districts, the crop averaging fifteen million pounds annually from about three million vines. A portion of this crop is used in the native wine-making industry.

The Burlington and Oakville districts near the head of Lake Ontario are famous for apples, pears and plums, and also for small fruits. The Lake Huron and Georgian Bay sections produces besides apples, enormous quantities of plums.

Another important fruit section exists in Prince Edward County at the eastern end of Lake Ontario, where for many years a great variety of fruits has been grown. Farther east, along the St. Lawrence, little fruit is grown except apples, as early frosts render tender fruits precarious. The smaller fruits, such as strawberries, raspberries, cherries, currants, and gooseberries, do well in almost any section of the province.

Small
Fruits.



SHIPPING TENDER FRUITS
TO GREAT BRITAIN.

ONTARIO'S AGRICULTURAL DEVELOPMENT

Ontario apples have for years been exported to Great Britain in large quantities. During the last few years, shipments of pears have been made, and have met with great success on account of their size, appearance and flavor. Experiments recently conducted by the Government have proved that it is quite possible to send delicate fruits to England in perfect condition. Shipments of pears, peaches, early apples and grapes, specially

Fruit Exports. selected and packed and placed in cold storage on the railway and steamship have been successfully made. The fine appearance of this fruit excited great interest in England, many finding it difficult to realize that it could be produced in the open air. To make this business a practical success, a continuous system of cold storage is involved, lasting from the time the fruit is picked in the orchard until it reaches the consumer. This is a difficult problem but its solution opens a new era for the fruit industry of Ontario.

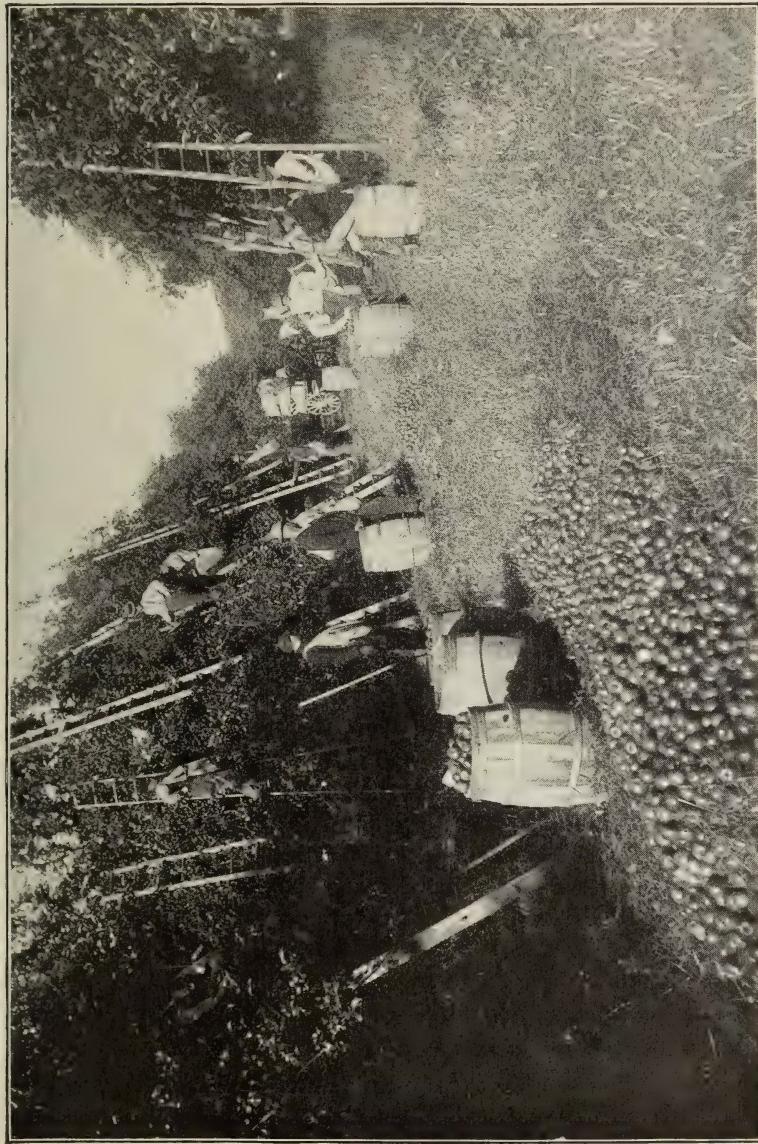
In the province orchards, vineyards and gardens occupy about 400,000 acres. There are now six million apple trees of full bearing age and about four million younger trees. The yield of apples is estimated to be between fifty and sixty million bushels per year. Some thousands of acres are planted with peach trees, and 11,000 acres are devoted to vineyards.

Canning Factories. The growing of fruits and vegetables for canning factories has become of recent years an important industry. Tomatoes are extensively grown for this purpose. In this convenient form, these products find their way to many distant markets.

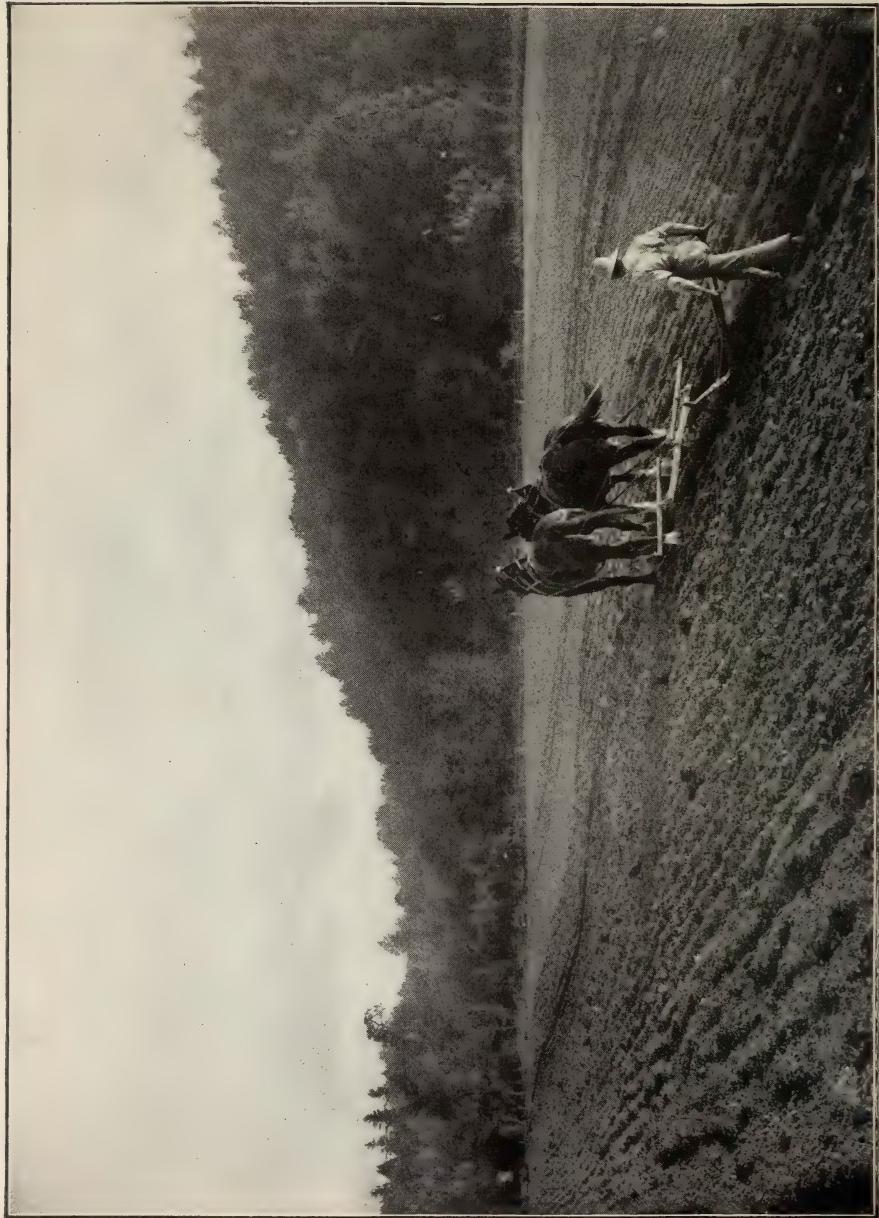
The evaporating of apples is extensively carried on in some localities. Over eight million pounds of apples in this form were exported in 1899.

Other specialties in connection with horticulture are, the growing of nursery stock, the production of flowers for sale, and market gardening. Large areas of land in the neighborhood of the principal cities and towns are now being devoted to the two latter industries.

A Fertile Soil. The farm lands of Ontario are as fertile as those of any country. A large proportion of the land in the southern part of the province is good but, as may be supposed, varies to some extent in different sections. The character of the country is, as a rule, gently rolling, and the nature of the soil is usually clay, clay loam, or sandy loam. While in some European countries larger yields are obtained, it is as a rule at a relatively greater cost. There is no doubt, however, that the lands of the province are not producing nearly to their full capacity.



GATHERING THE APPLE CROP.



SUMMER FALLOWING.
An Ontario Farm Scene.

ONTARIO'S AGRICULTURAL DEVELOPMENT

Neither is there any doubt that the productive capacity of the soil might be greatly increased, by more thorough and systematic farming, by more extensive underdraining, more care in crop rotation, and by feeding more stock on the farms.

Winter wheat was at one time the principal grain crop. Now it is no longer raised for export, although a considerable quantity is grown for home use. About a million acres of land are annually devoted to winter wheat, and the average yield is 20 bushels to the acre. Yields of thirty and forty bushels to the acre are not uncommon, where the fertility of the land has been maintained and the soil properly prepared. Of spring wheat, between three and four hundred thousand acres are grown, and the yield averages about 16 bushels.

Over two million acres of oats are planted every year in Ontario, and the average yield is about 35 bushels per acre. Barley yields between twenty-five and thirty bushels on an average and half a million Oats, Barley, and Peas. acres are occupied by that crop. The six-rowed variety is usually grown.

One of the most important crops the farmer grows is peas. Pea meal is a valuable part of the grain ration both for milk, and beef and pork. About 750,000 acres of peas are grown, yielding an average of 20 bushels.

Sixty years ago all grain crops had to be harvested with the sickle. To-day the modern harvester will cut and bind the heaviest crop of grain and do the work in the most perfect manner. Similarly, in the early history of the country, all the grain was threshed with a flail, and the work Labor Saving Machinery. took the whole winter to accomplish. Now the threshing machine, which travels with its gang of hands from farm to farm, threshes and cleans the grain ready for market, besides doing the work as fast as two men can fork the sheaves into it.

The grain crops of Ontario for 1899 amounted to 152,000,000 bushels ; 90,000,000 of which were oats and 15,000,000 bushels each of winter wheat, barley and peas. Oats are exported in large quantities to Great Britain and Ireland, and oatmeal to Scotland and England. Grain Production in 1899. Most of the winter wheat grown is milled in Ontario, but some spring wheat is exported. Ontario barley is superior to the best barley grown in the United States, and is eagerly sought for by United States maltsters ; but owing to the high protective tariff very little finds its way to that country. Peas are exported largely to Great Britain and the

ONTARIO'S AGRICULTURAL DEVELOPMENT

Continent. Canadian peas are considered the best sample grown in any country in the world.

The kinds of hay commonly grown are timothy grass, red clover and alsike and occasionally lucerne or alfalfa. A large quantity of clover seed is exported to Europe. Hay is cut during the first week in July. Hay dries fast in the Ontario climate. With good weather, it may be raked into cocks the same evening as cut, drawn to the barn the following day and stored away in the hay mow. There is no department of farm work more

replete with labor saving contrivances. The mowing machine
Hay Harvesting. has been in use for many years, but of late it has been greatly simplified and rendered much more effective. For raking the hay, the "sulky" rake is now in general use. Another form of rake is one with a side delivery, which throws the hay into continuous windrows, which is of great advantage where a hay loader is used. Another useful implement is the tedder for shaking out the hay, and the horse fork for delivering it to the mow.

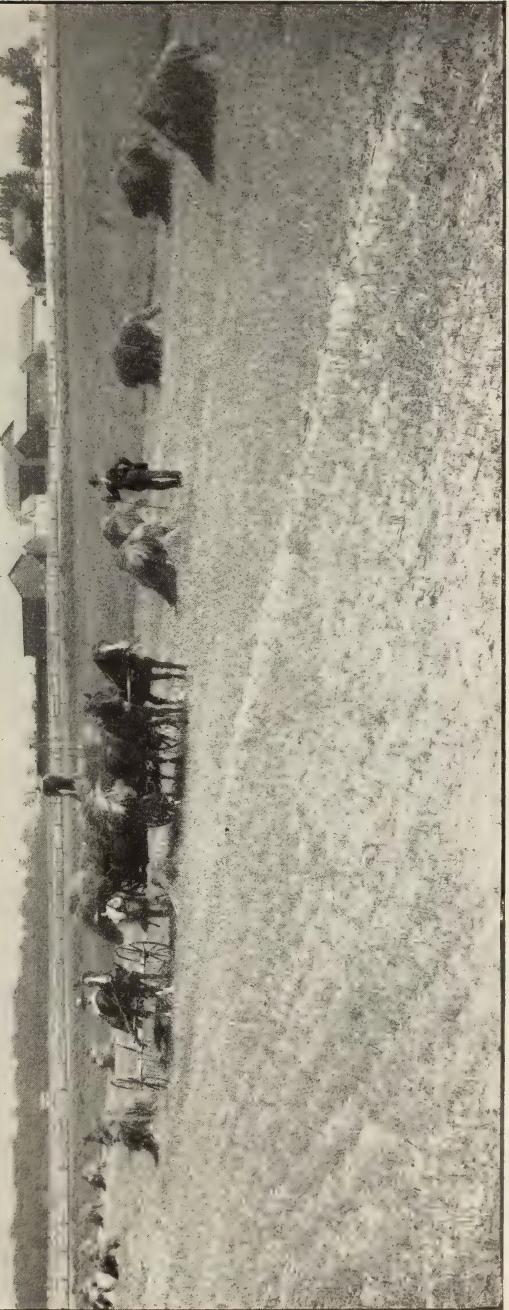
In a similar manner the amount of manual labor has of recent years been greatly reduced in nearly all departments of the farm. Not uncommonly, "sulky" plows, harrows and cultivators are employed, on which the farmer sits while driving, just as he does on his reaping machine. The modern steel frame windmill is very commonly used for the pumping of water, cutting of food for stock, etc. With the aid of such devices as these the farmer is enabled to dispense to a considerable extent with hired help.

Root Crops. Roots are among the most valuable stock feeds, and are widely grown. The average yield of turnips is 422 bushels per acre; of mangels, 437 bushels; of carrots, 350 bushels; and of potatoes, 115 bushels. About 350,000 acres are devoted to these crops.

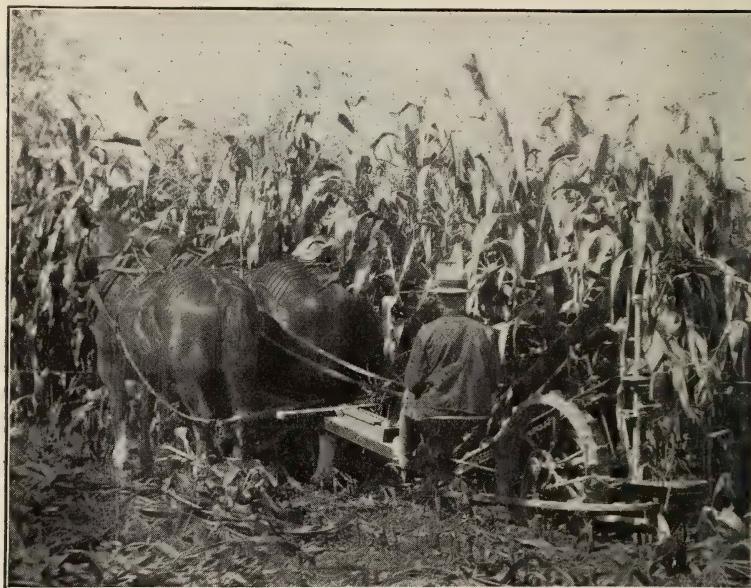
The cultivation of the sugar beet is in an experimental stage, but will probably push itself successfully to the front and become an established industry in the near future, as it has already been shown that Ontario can produce beets of a high standard for sugar making.

So important a place in Ontario agriculture has the raising and feeding of live stock assumed that one of the farmer's most important studies is to provide the most economical fodder supply. Fodder is necessary during the winter months when the cattle are stabled, and also during the late summer months when pastures are liable to fail on account of dry weather.

AN ONTARIO FARM SCENE : DRAWING IN WHEAT.



ONTARIO'S AGRICULTURAL DEVELOPMENT

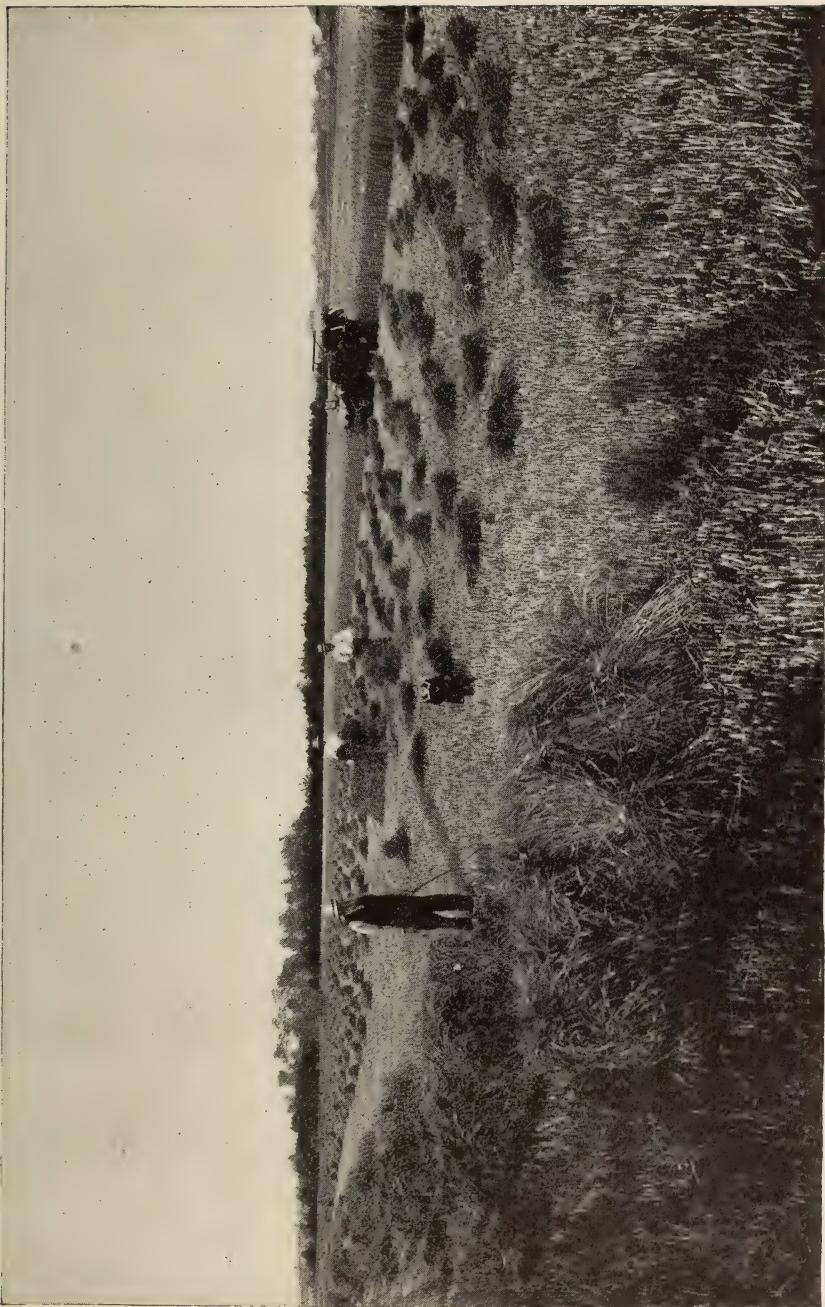


HARVESTING FODDER-CORN.

In addition to the ordinary root crops, he usually grows a few acres of "Indian" or fodder corn, which is cut before full maturity is reached and stored in the silo. This is the surest fodder crop he can raise.

Ensilage. No matter whether the season be wet or dry a fair crop is almost assured. The amount of stock that can be kept on a farm where much corn fodder is raised is relatively very large, and the area devoted to the crop is continually increasing. Nearly all stock men grow and feed more or less corn. In dairying especially, ensilage is a distinct factor in making the business a paying one. Corn is planted about the end of May with a seed drill in rows about 30 inches apart. It is cut about the first week in September. It is either put up in large shocks in the field where it remains until wanted for feed, or, better still, it is chopped into pieces about an inch long and stored in the silo.

The silo is an air-tight chamber built of concrete or wood, either inside or outside the barn, which preserves the corn in a fresh and succulent con-



HARVESTING THE WHEAT CROP
IN ONTARIO.

ONTARIO'S AGRICULTURAL DEVELOPMENT



BARN WITH
SILO ATTACHED.

dition. From the silo, the fodder can be conveniently fed to stock as required. No other crop will produce the same amount of bulk and weight to the acre.

The Silo. It grows from six to ten feet high and produces from ten to fifteen tons per acre on an average, while occasionally much larger yields are obtained.

Ontario is well adapted to the keeping of bees, and the industry is profitably pursued by those engaged in it. There are 200,000 hives in the province, and 8,000,000 pounds of honey of very fine quality are produced annually.

Hops, beans and tobacco are also specialties in some sections.

The summer season is very favorable to farming operations in Ontario. As soon as the winter breaks up, the busy season for the farmer commences.

Farm Operations. The frost is usually out of the ground by the beginning of April, and by the middle of the month the land is sufficiently dry for

ONTARIO'S AGRICULTURAL DEVELOPMENT



BARN-RAISING :
A Social Function.

spring plowing to commence, and as a rule seeding is pretty well through by the first week of May. After the first of June the summer is short and hot. The crops rapidly grow to maturity and have to be harvested in quick succession. First hay, then barley; closely followed by wheat and oats; and the farmer works from daylight to dark. The wheat harvest commences about the third week of July in the most advanced districts, and the bulk of the crop is harvested and in the granary by the second or third week of August.

The spring rains are usually abundant, and sometimes extend on into June. The summer months, according to the English climate, would be considered exceedingly dry, every day being one of brightness and sunshine. During the months of harvest, the weather is usually dry and settled. Of course, seasons vary somewhat, but grain and fodder crops seldom suffer from an excess of moisture.

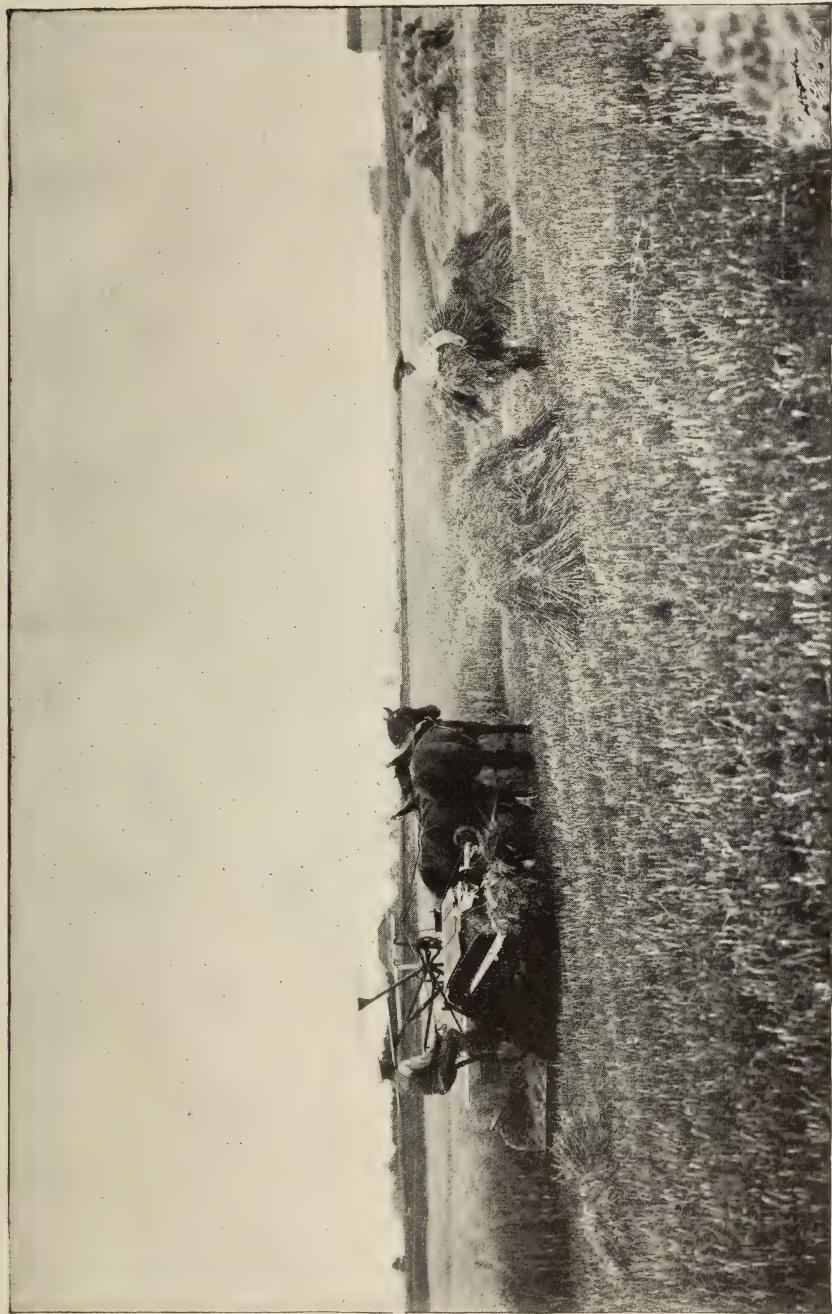
ONTARIO'S AGRICULTURAL DEVELOPMENT



A MODERN BARN,
With Basement Stable.

The apple and the root crops have been well secured before the middle of November, and for the remainder of the month the farmer is engaged in plowing the land intended for seeding the following spring. The weather is liable to turn cold at any time, and frost sufficient to stop the plow is in order at short notice. After the close of November, outside work is practically at an end, and from then until the beginning of April the farmer has comparatively little to do, except to attend to his stock, or take his produce to market on his sleigh over the good roads which the snow provides for him. If the Ontario farmer is hard worked in summer the winter season is one of comparative leisure, and it is then that he indulges his social inclinations.

The climate necessitates that stock should be housed and fed in winter time. The stables for cattle are usually built under the barn, and are known as basement stables. They are constructed of brick and stone or concrete and serve as a foundation for the barn, a spa-



ONTARIO FARM SCENE;
SELF-BINDER HARVESTING OATS.

ONTARIO'S AGRICULTURAL DEVELOPMENT

cious wooden structure in which the cereal crops are stored. This is found to be a very convenient arrangement as food and bedding can easily be supplied to the stables below.

The farmers of Ontario are effectively and actively organized. Each department of the industry is represented by an association which advances its interests. The dairymen the fruit growers the poultry men the stockmen, the horse breeders, each have their association. These are educative in and

their object and receive liberal aid from the Provincial Legislature. They meet at stated times and their members read papers, deliver addresses and engage in discussions. The information thus gathered is afterwards printed by the government and liberally distributed among the farmers for their information in the form of reports.

The Farmer's Institutes constitute one of the best means of furnishing help and information to the rank and file of the farmers. These institutes have been organized in almost every township. Each year they hold a series of meetings or conferences, which are attended by delegations of speakers sent out by the Department of Agriculture, who deliver practical addresses on farming in all its branches, and give information as to the latest and most approved methods.

Every county in the province has from one to three district agriculture societies, and the territory is again sub-divided between township and horticultural societies. These societies are organized under Government auspices and receive state aid. It is customary for each society to hold an annual exhibition and to offer prizes for products. Important exhibitions of this kind are held in Toronto, London, Ottawa and several other centres. The horse-

Agricultural Exhibitions. breeding industry is especially represented by an annual Horse Show, held in Toronto. Every year a large and representative exhibition of live stock, known as the Provincial Winter Fair is held in the city of Guelph. Fat stock, dairy cattle, and live and dressed poultry are exhibited. Ontario possesses one of the finest and best equipped agricultural colleges on the American continent. The Ontario

Ontario Agricultural College. Agricultural College and Experimental Farm is an institution founded and maintained by the Provincial Government, under the direct control of the Department of Agriculture for the express purpose of providing the sons of farmers with an education exactly suited to the requirements of their calling. Unlike American colleges

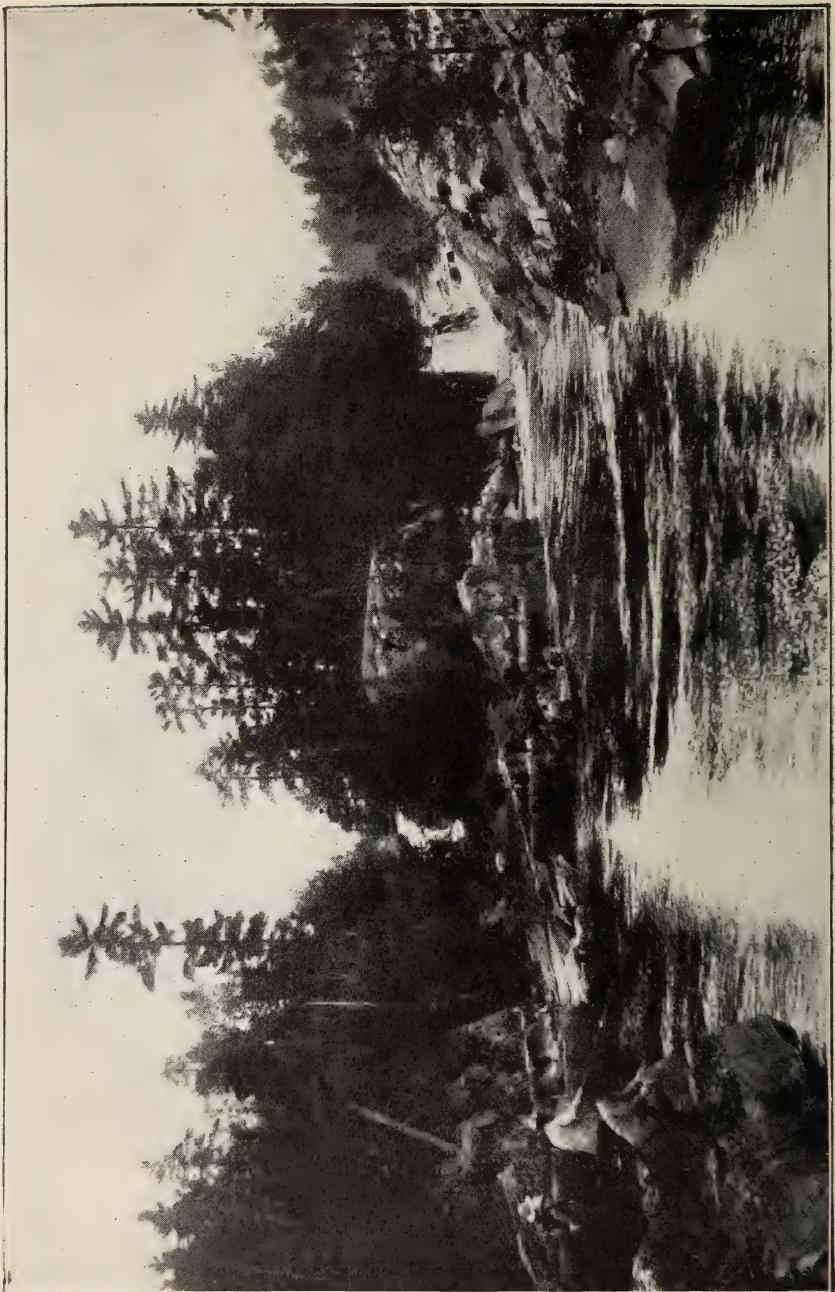
ONTARIO'S AGRICULTURAL DEVELOPMENT

of the same class it is devoted to agriculture only. The course of training is a combination of practical with scientific work. In addition to this, dairy schools have been established at Guelph, Strathroy and Kingston, where the student may secure a thorough course in cheese and butter-making, such as will fit him to undertake the management of cheese and butter factories.

An important feature in agricultural development in Ontario during the past fifteen years is the establishment of experimental farms and experiment stations. Associated with the Experimental Farm is the Ontario **Experiment Stations.** Experimental Union. By its efforts a system of co-operative

experiments has been established among the farmers. The number of individual experimenters is over two thousand. By this means, new and improved varieties of grains, etc., are tested and introduced from seed distributed from headquarters. In the interest of fruit growing, the Government has likewise established thirteen fruit experiment stations, the object being to test different varieties of fruit and determine their suitability for the locality represented.

By these agencies many problems of vital importance to the farmer have been solved and a mass of information obtained which has helped him to make his business more profitable. The whole of this important work is presided over by a special department of the Provincial Government—the Department of Agriculture, having a practical farmer at its head, who has a cabinet portfolio.



RIVER SCENE,
NORTHERN ONTARIO,

Northern Ontario

A FIELD FOR CAPITAL AND ENTERPRISE
PROGRESS OF DEVELOPMENT
FARM LANDS FOR SETTLERS

NORTHERN ONTARIO, or "New Ontario" as it is sometimes called, extends northward and westward from the older settled portion of the Province to James Bay and the Albany River. Its vast extent is hard to realize, comprising as it does an area of about 140,000 square miles, or 90,000,000 acres, a considerably greater territory than the settled portion of Ontario. So valuable have its resources been proved to be by the explorations undertaken in 1900, that the question of its development in relation to the future prosperity of the Province as a whole is becoming one of ever-increasing importance.

Scientists tell us that throughout a considerable portion of this region the fundamental rocks upon which the very foundations of the continent are laid here come to the surface and are laid bare. They are known as the

Nature of the Country. Laurentian and Huronian rocks, to which the general term Archæan is applied, as denoting their extreme age, for they belong to the very oldest of the earth's rock formations. A relatively large portion of the area is covered with innumerable lakes of all sizes, which have been eroded by glacial action. The land surface is generally hilly and broken with ridges of rock, which often rise precipitously above the rocky lake basins, forming rugged cliffs or bluffs. Everywhere, except where fires have devastated it, or settlement has taken place, the country is still covered with a dense growth of forest.

Northern Ontario has not been considered as a whole a farming country. Its surface, in the earlier explored part, is for the most part rocky and broken, and its resources are those of the forest and the mine rather than of the farm. Yet it has the advantage of possessing large areas of farming land, as fertile as any in the Province and capable of supporting in the aggregate a large population. The more accessible of these sections are already partly settled, while others are without means of communication, and too remote to be considered at the present time.

NORTHERN ONTARIO



PIONEER ROAD-MAKING,
Through Pulp-wood Forest.

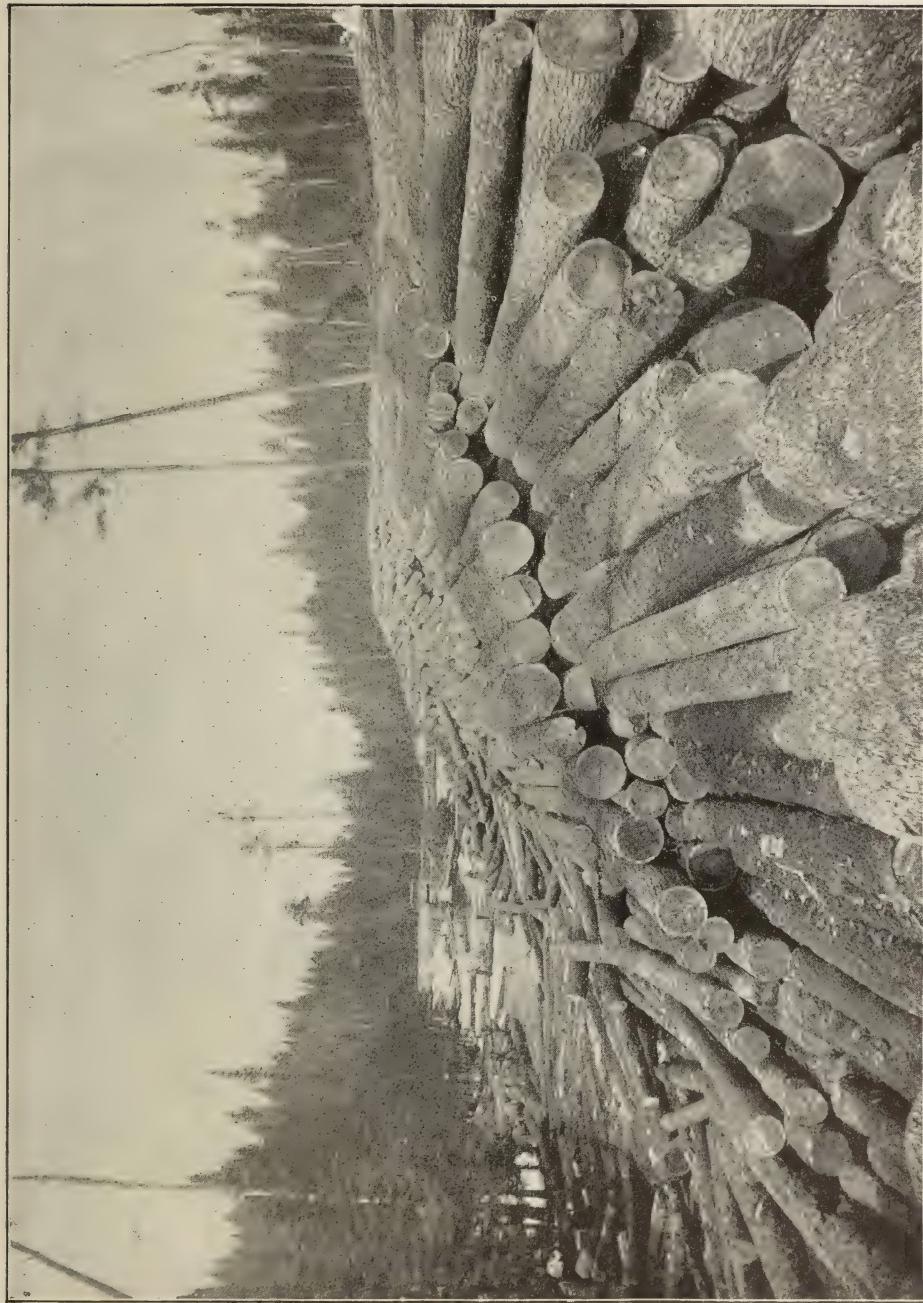
Temiskaming District.

Among the more important areas now available for settlement is the Rainy River valley, west of Lake Superior and south of the Lake-of-the-

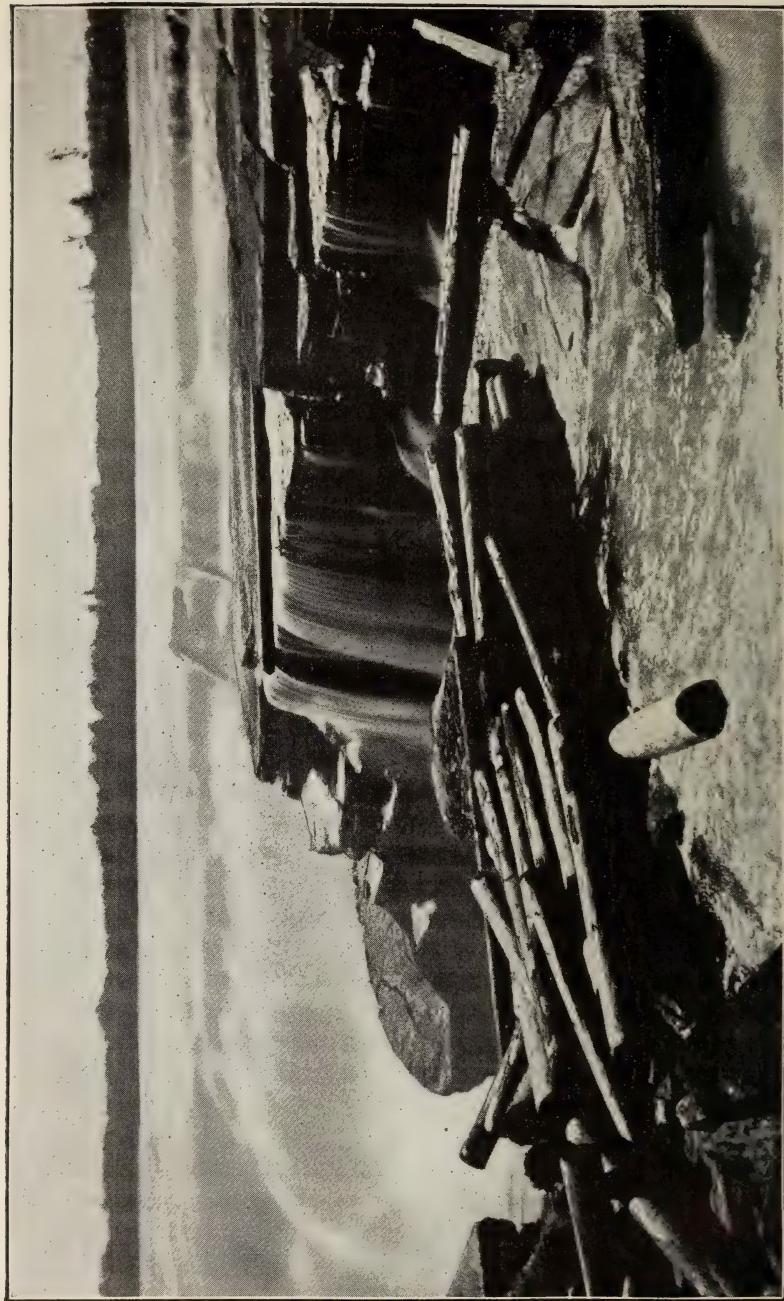
Large Fertile Areas. Woods, where there are about a million acres of very fertile land, suited to all kinds of farming. A good many settlers

have already located along the river front, and have good houses and barns, large clearings, good fences, and well-bred stock. The construction of the Rainy River Railway has rendered this district very accessible, and the land being free it is rapidly filling up. Along the Wabigoon River in the same district another section of good land is found, of which the Dryden settlement is the centre.

On the upper Ottawa, in the region of Lake Temiskaming, is a large area of level, fertile land, adapted to all kinds of farming. **The Great Clay Belt.** About one million acres have been surveyed and settlers are beginning to locate there in numbers. The land is sold by the Government at 50c. per acre, subject to the fulfilment of settlement duties.



LOGS READY TO FLOAT DOWN STREAM TO THE SAW-MILL.



UNDEVELOPED WATER-POWER
ON THE OTTAWA RIVER,

NORTHERN ONTARIO

It is reached partly by railway and partly by steamboat. The explorations made on an extensive scale in 1900 have established the fact that this fertile clay belt extends in a north-westerly direction across the Nipissing and Algoma districts, embracing a total area of 24,500 square miles.

In the districts of Muskoka, Parry Sound, Haliburton, around Thunder Bay on Lake Superior and especially north of the Georgian Bay in the Algoma district, much excellent land exists. For the most part the country in these sections is broken up by ridges of rock, but between these and protected by them, stretches of arable land often unbroken for thousands of acres wind in and out. Everywhere lakes and rivers abound and constitute a marked feature.

In all the sections the land is thickly timbered except where fire has passed over it. With the exception of some tracts of hardwood **Timber.** in the southern limits, most of the timber is what is termed "pulp wood" and is not difficult to clear.

The climate is healthful and invigorating. While the winters are undoubtedly cold, they are probably not as severe as those of Manitoba, on account of the moderating influence of the forest growth. While **Climate.** Winnipeg is on the 50th parallel of latitude, the Temiskaming country lies south of the 48th; the Rainy River Valley, south of the 49th; Southern Algoma and Southern Nipissing, just north of the 46th; while the 49th which is the southern boundary of Manitoba, passes through the centre of the Great Clay Belt. In summer the weather is slightly more temperate than that of Southern Ontario.

Northern Ontario will grow to perfection as many varieties of grasses, grains and vegetables as grow anywhere and grow them well. In cereals and grasses, its virgin soil produces crops which exceed in yield **A Fine Grazing Country.** and quality the most favored section of the United States, and even the average of Ontario generally. It is a typical country for the production of mutton and beef, cheese and butter. Even its rocky bluffs—where these exist—clothed as they are with a vigorous growth of timber protect the pasture land of the valleys where cattle and sheep may roam and graze for seven months of the year, and are not, therefore, without their compensating advantages. The sheep is exactly adapted to Northern Ontario, and the supreme excellence of the mutton raised in this region is a matter of note. As a dairy, stock and sheep raising country it has all the advantages of cheap land, good transportation

NORTHERN ONTARIO

facilities, rich soil, good water, and cheap building material, while its climate is unexcelled for the production of vigorous stock and vigorous men.

Here and there in Northern Ontario, scattered along the line of the Canadian Pacific Railway, prosperous and enterprising towns are to be met with, each forming the centre of a group of one or more industries which give employment to many operatives. They are

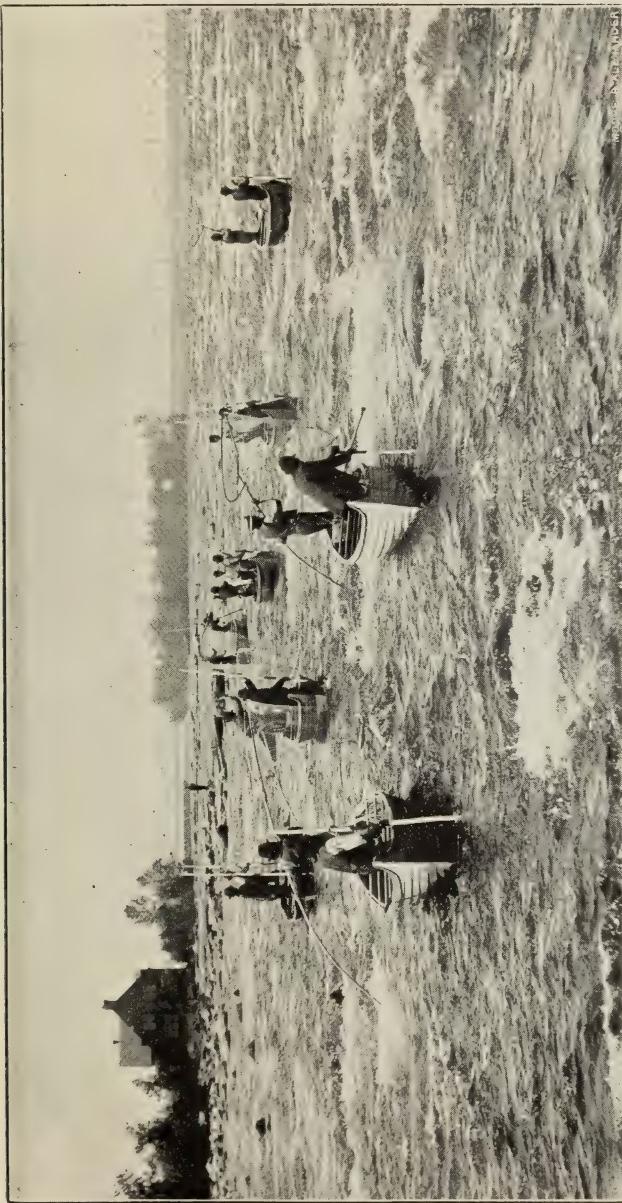
Industrial Centres. also the commercial centres, from which equipment and supplies are obtained, and the headquarters from which the business of the country is transacted. Thus Mattawa is a centre for the lumber industry of the Upper Ottawa; North Bay a railway centre; Sturgeon Falls has an agricultural country at its back; Sudbury is the seat of the great nickel and copper industries of Ontario; Sault Ste. Marie, the headquarters of the Clergue industries, while Rat Portage is the centre of the Lake-of-the-Woods gold fields, and of extensive lumbering, flour and saw milling industries. Port Arthur and Fort William in the Thunder Bay District, at the western end of Lake Superior are both ports for lake commerce, and also railway centres. Three railways converge at these points, and grain from the western prairies is here transferred to lake vessels in large quantities. Much of the country in the immediate neighborhood of these two towns is excellent farm lands, but as yet is not extensively settled. The minerals of this district include iron, copper, silver and gold. The timber is principally spruce, and there are several fine undeveloped water powers in the vicinity.

It is in Northern Ontario that the great development of Ontario must in the future take place and a good beginning has been made. Large sums

Railway Construction. have been and are being spent in railroads, mines, forest industries, and farm lands. An era of railroad building has already been inaugurated, and with the construction of railways, fresh

fields will be opened up for the investment of capital, the employment of labor, and the location of settlers on the land thus rendered accessible—all of which will afford additional markets for the manufactured products of the country and add to the welfare of the community.

Considerable as the developments have been in the aggregate, yet the extent of territory is so enormous that the country may be said to have been only scratched. Even in the settled sections, civilization rubs shoulders with backwoods life. A few hours' journey takes the traveller from the commercial mart to the rough camp of the lumberman and the miner, and to the railroad construction gang. In districts apparently uninhabited he



SAULT STE. MARIE.—INDIANS FISHING IN THE RAPIDS.

NORTHERN ONTARIO

comes upon the prospector blasting rock for minerals, the drive of logs coming down stream to the mills, or the operations of a railroad contractor levelling the ground ahead of him for the rails that are to follow, showing that human skill and energy are being brought to bear to reap the harvest of the forest and to secure wealth from the minerals.

One of the best instances of what skill and capital can accomplish in the development of these latent resources, will be found in the industries

Industrial Development. established by the Clergue Syndicate at Sault Ste. Marie, where results that seem little short of marvellous are being achieved.

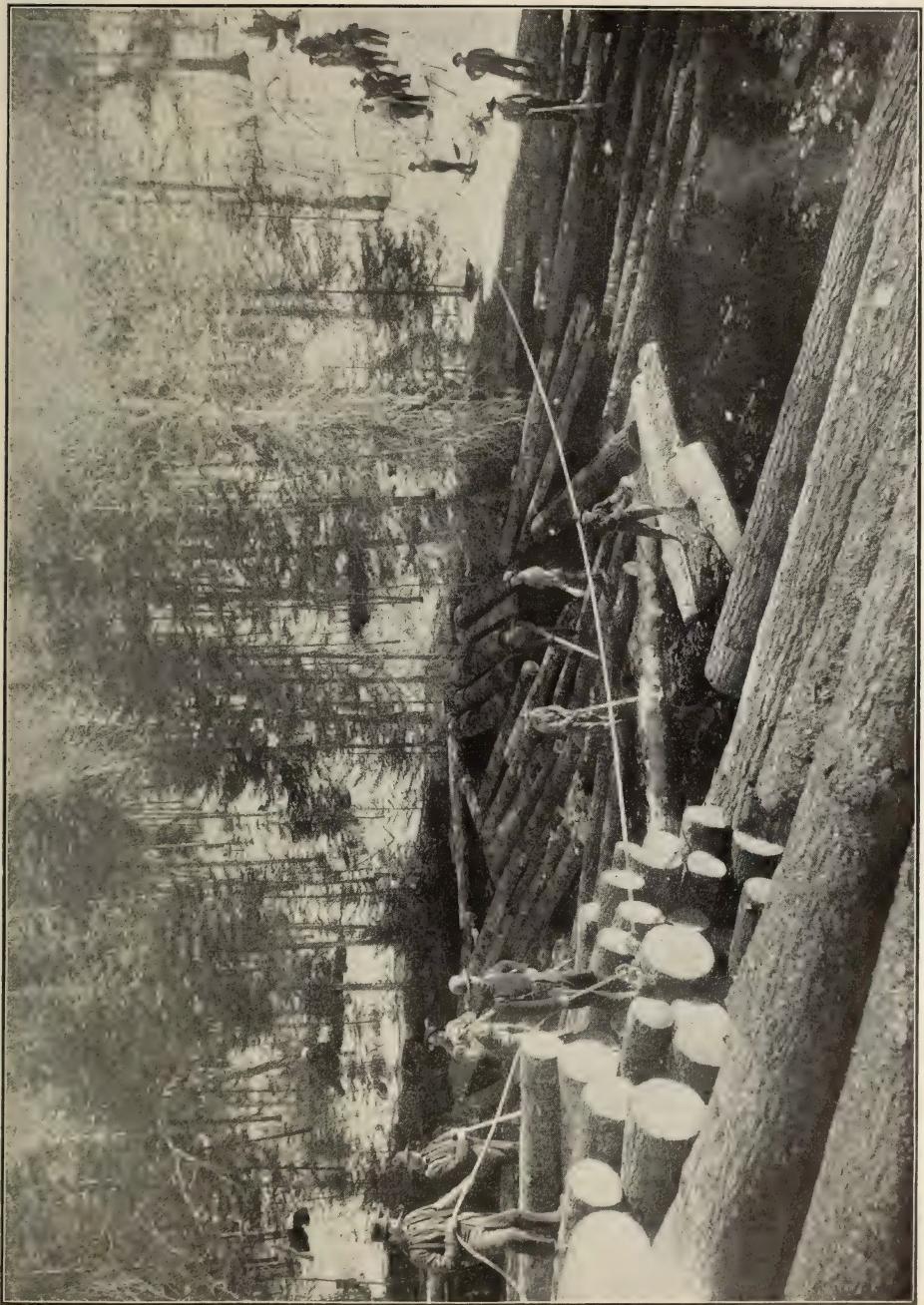
This series of industries had its beginning about five years ago in the harnessing of the rapids at the Sault, to which the drop in the level between Lakes Superior and Huron gives rise, and its application to the production of electrical energy. By this means heat and power are evolved without the employment of coal or any other fuel.

At first 20,000 horse power was developed, the major portion of which is used in supplying power to two enormous mills for the production of **Wood Pulp.** mechanical wood pulp from the spruce tree, which grows abundantly in the adjacent forest. Forty thousand additional horse power will soon be available for other purposes.

The daily output of these mills is 150 tons of dry pulp, in the making of which 200 cords of spruce are consumed. This product is used chiefly in the making of paper, and the output, valued at a million dollars per year, is being shipped to Japan, Australia, France, England, and the United States. A large and handsome mill for the manufacture of sulphite pulp, a more valuable article than mechanical pulp, is now about completed. In the manufacture of chemical pulp, sulphur is required, and for its production the native resources of the country are also being utilized. Sulphur is

Nickel-Steel Production. being obtained from the sulphurous ores of nickel and copper found in the district. This has incidentally given rise to the development of a nickel property, and the erection of a reduction works capable of treating five hundred tons of ore daily. In this connection blast furnaces employing heat generated by electricity have been erected for the production of ferro-nickel pig. This is afterwards refined into

Sodium and Chlorine. nickel-steel. A contract has lately been entered into with the Krupps of Germany for a five years' supply of this metal. For the separation of the copper from the nickel, sodium is necessary. In order to procure it, an alkali works has been erected, where



HAULING THE LOGS TO THE RIVER.

NORTHERN ONTARIO

Ontario salt is converted into sodium and chlorine. From the latter, bleaching powder is made to supply the home market.

But the story of development does not end here. In the mining and smelting of iron and its conversion into manufactured articles, the record promises to be even more remarkable. Near Michipicoten harbor, on the north shore of Lake Superior, 125 miles west of Sault Ste. Marie, very extensive deposits of iron have been secured by the Clergue Companies.

Iron Mines. Operations on the Helen mine began in the spring of 1900, and

by the following autumn 1,000 tons per day were being shipped in steel ships to the blast furnace at Midland. The ore is a rich red hematite, and it is estimated that on this property alone there are now 30,000,-000 tons of ore in sight. Other valuable iron deposits exist in the same neighborhood. During 1900, four steel steamers, each of 2,500 tons burden, were employed in transporting the ore. This season the capacity of the fleet will be doubled.

Important as are the enterprises already described, they are likely to be overshadowed by the iron and steel industries of which the

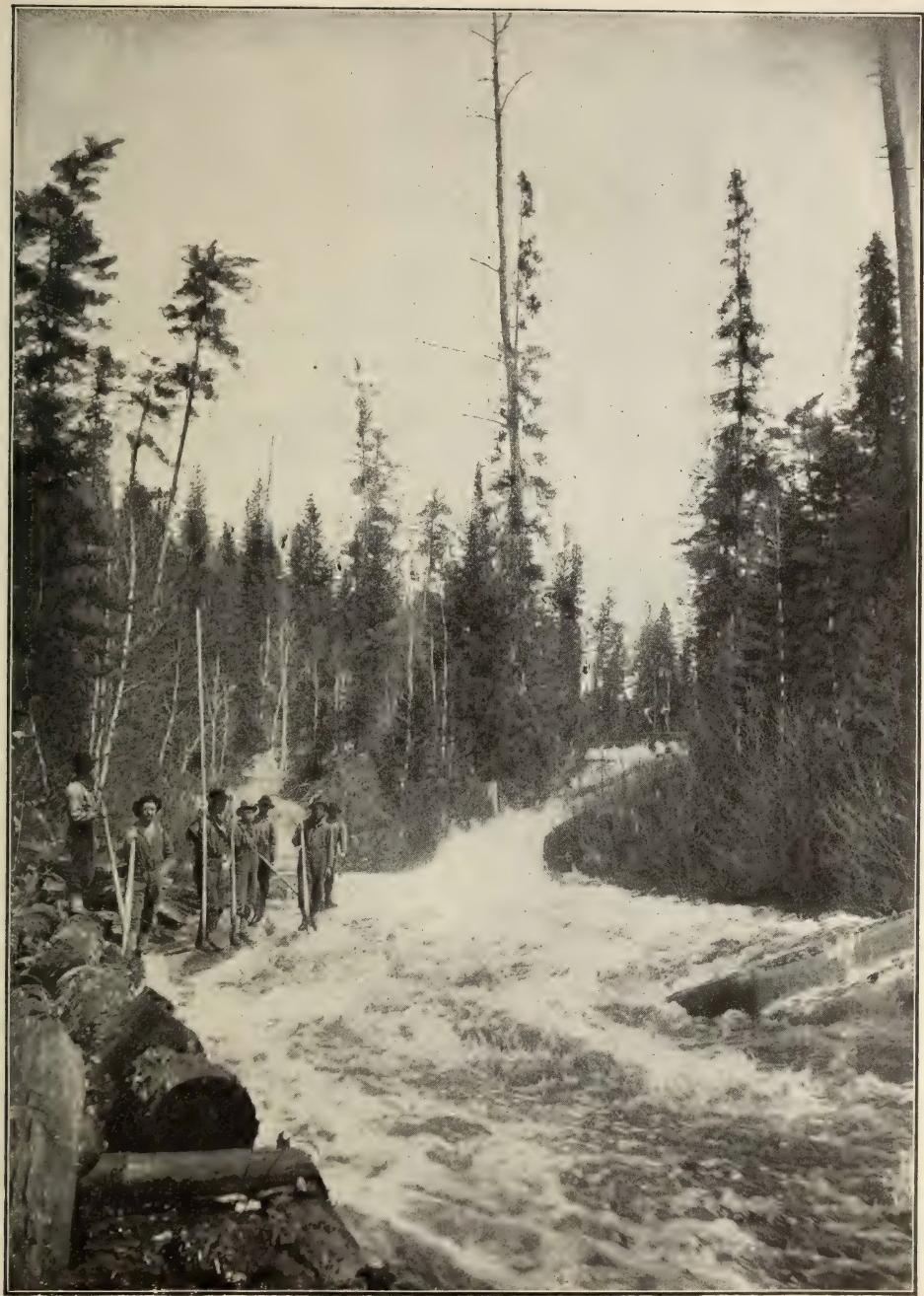
A great Manufacturing Centre. Sault is to become the centre. This project included huge blast furnaces for the production of bessemer steel, armour plate, rails, billets and structural materials, and will give

employment to thousands of men. The Company proposes to construct its own locomotives from its own iron, and build railway cars from timber obtained in its own limits. In fact all the machinery and appliances required in carrying on the various industries described, will be manufactured in the foundries and machine shops at Sault Ste. Marie. The Dominion Government have already made a contract with them for 25,000 tons of nickel-steel rails for the Intercolonial Railway.

Another enterprise in which the capitalists associated with Mr. Clergue are engaged, is the building of a railway running directly north from Sault Ste. Marie through the unbroken forest to the shores of Hudson Bay.

Railway to Hudson Bay. Some miles of this road have already been built, and three years from now, travellers will be carried by Pullman car, through a land that is now inaccessible, to the shores of the Arctic sea.

This railway is known as the Algoma Central and Hudson Bay Railroad. It is proposed to make it a thoroughly up to date and well equipped line in all respects. For hundreds of miles it will run through dense forests of trees of commercial value. These include the maple, hard



RIVER-DRIVERS
WAITING TO PREVENT JAM OF LOGS
AT AN AWKWARD BEND.

NORTHERN ONTARIO

elm, birch, tamarac and white pine, besides spruce, balsam, poplar, etc. In the extreme north there are hundreds of miles of the finest spruce forests, sufficient to supply all the paper mills on the continent for generations to come. Large areas of fertile land also exist, and a scheme for their settlement will be actively pursued in conjunction with the building of the road, the company undertaking to locate at least one thousand male settlers per year for ten years as part of the consideration of its land grant, The settlers along the line of railway will find a profitable home market among the lumbermen, miners and other operatives.

The development of the fish trade will also be made a source of revenue to the company. The company states that within three years their through trains will be carrying fish from Moose Factory on Hudson Bay to Chicago, a distance of 923 miles, and the probabilities are that the Hudson Bay salmon will soon become one of the staple articles of food in Canada and in the United States.

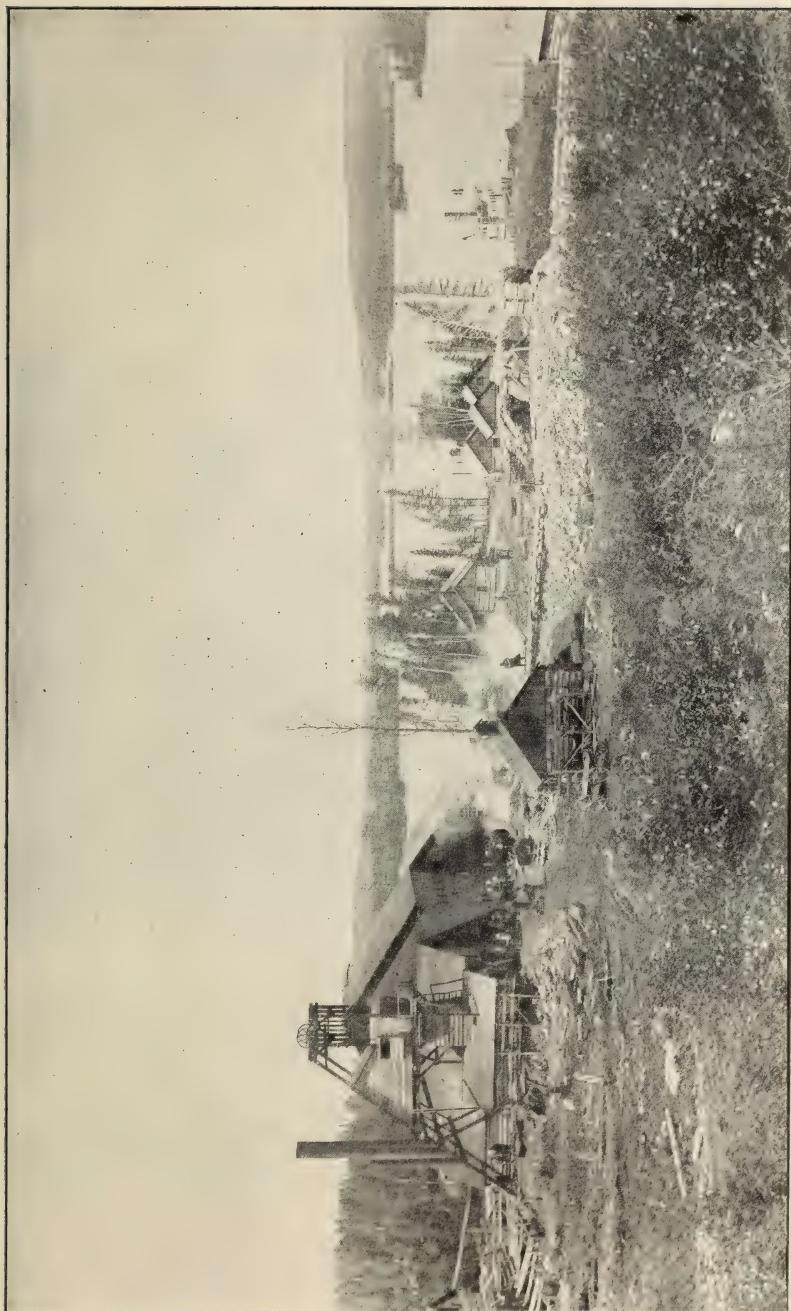
Sault Ste. Marie is growing with great rapidity under the stimulus of these industries. During the five months prior to September, 1900, the population increased 75 per cent. Mr. Clergue, the head of these enterprises, has well been termed "the province builder," and bids fair before many years have gone by to have thoroughly earned the title.

The Ontario Government, by its vigorous and progressive policy, is doing much to promote the development of Northern Ontario. To assist the construction of the Hudson Bay and other railways, large grants of land were made by the Legislature, and from time to time judicious laws have been placed upon the statute book in order to secure the greatest amount of good to the Province through the carrying on of these native industries.

The Ontario and Rainy River Railway, which is a link in another great transcontinental railroad system, now being constructed by MacKenzie,

The Rainy River Railroad. Mann & Company, will render available the resources of another section of New Ontario. This road runs westward from Port Arthur at the western end of Lake Superior through the Rainy

River district to the Lake-of-the-Woods, in the Province of Ontario, and afterwards across the Province of Manitoba to Winnipeg and the West. The Ontario section is now nearly completed. This railway passes through the midst of the iron ranges on the Mattawin and Atikokan, the gold-bearing rocks of the Seine river, through forests of pine and spruce



THE MIKADO GOLD MINE;
LAKE-OF-THE-WOODS, ONT.

NORTHERN ONTARIO

and finally through the splendid farming country on the Rainy River Valley. Among the railways projected but not yet built are the following : the James Bay Railway, from near Sudbury to Lake Abitibi ; a railway to Lake Temiskaming ; the Manitoulin and North Shore Railway, and the Thunder Bay, Nipigon and St. Joe Railway.



Glimpse of an
Ontario Country Road.

The Mineral Resources of Ontario

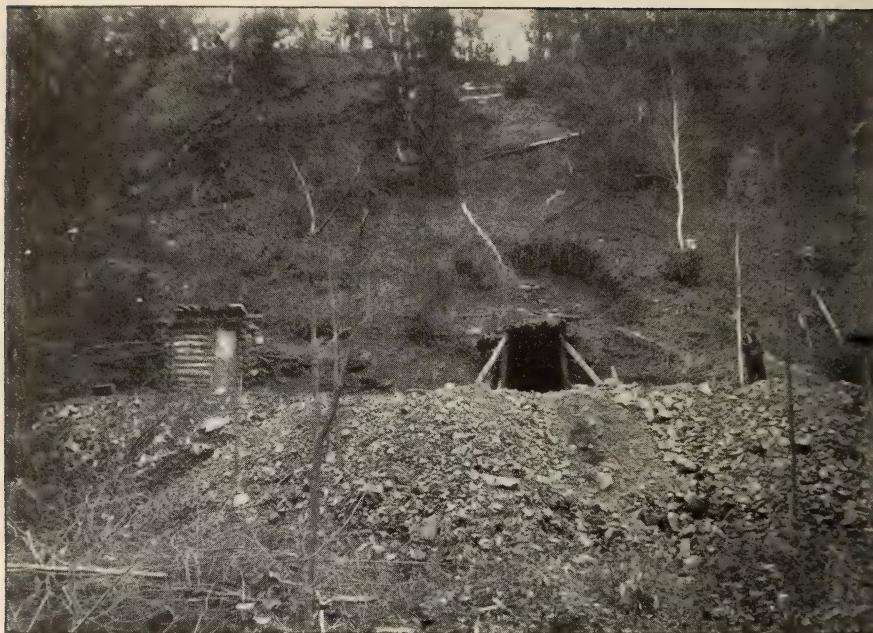
CHARACTER AND PRODUCTION

THE mineral resources of Ontario are widely spread, varied in character, and cover almost the entire list of economic minerals with the exception of coal. Examination shows that even now, when only on the threshold of discovery and development, they are of great extent and value. Not only does the varied list include all the principal and commonly found metals such as iron, copper, lead, silver and gold, but it also embraces the comparatively rare metal, nickel, the **Minerals.** enormous deposits of which in the Sudbury district constitute one of the two sources of the world's supply.

The metallic minerals are found chiefly associated with the schists and chlorites of the Huronian system of rocks. Those rocks extend in belts or tracts sometimes for hundreds of miles among the Laurentian granites and gneisses, the latter constituting the main formation northward from the older settled portions of the Province to the Hudson Bay slope, and from Quebec boundary in the east to the Province of Manitoba in the west. The amount of systematic prospecting that has been done is small indeed in proportion to the extent of territory. The greater portion of the country has not even been run over by prospectors and cannot be thoroughly explored for many years to come. To the settled farming country of the south belong practically all products of the structural material class. These, with petroleum, at present constitute nearly 60 per cent. of the whole mineral production of the Province. In the near future, however, the metallic mineral products are certain to assume much larger proportions. This statement is particularly true as regards iron, the mining of which has been greatly stimulated owing to the erection of blast furnaces at several points in the Province and the consequent demand for iron ore, following on the great advance in the price of iron during the last two years.

The ores of iron occur in Ontario in great abundance. The most important and extensive deposits are the magnetites of the Atikokan River, the hematites of the Mattawin range, the deposits in the vicinity of Gunflint

THE MINERAL RESOURCES OF ONTARIO



MOUTH OF TUNNEL,
Atikokan Iron Range.

Lake and Hunter's Island, all west of Lake Superior, and the large bodies of hematite recently discovered at Michipicoten, on the east shore of that

Iron. lake. These ranges may be followed for miles and the western

ores are said to form a continuation of the Minnesota deposits, which now lead the world in the production of iron. Extensive ranges and deposits also exist to the north of Lakes Superior and Huron, and in the neighborhood of Lake Temagami. In the eastern part of the Province there are large deposits of both magnetite and hematite.

The establishment of modern blast furnaces at Hamilton, Deseronto and Midland is leading to the opening up of a number of iron deposits. Similar furnaces are projected at Sault Ste. Marie, Collingwood, Kingston and Port Colborne, and the prospects for the industry are bright. The production of iron ore for 1900 was 90,302 tons, most of which was smelted in Ontario. The amount of pig iron produced was 62,386 tons, valued

THE MINERAL RESOURCES OF ONTARIO

at £936,066, made from Ontario and United States ores. About 3,000 tons of steel were produced.

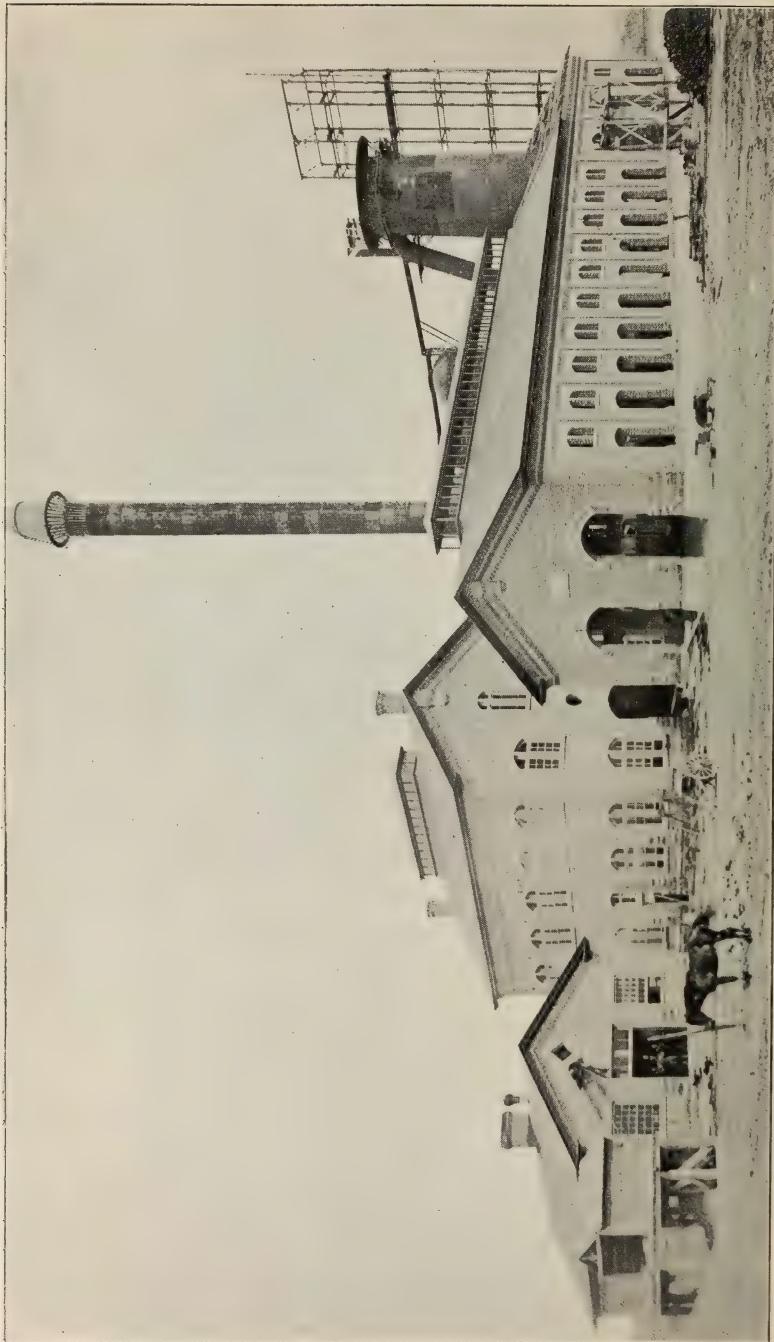
The most extensive deposits of nickel-bearing ore in the world are found in Ontario. They extend over a wide area north of Lake

Nickel. Huron, in the districts of Nipissing and Algoma, and recent discoveries of the ore have been made in the district of Parry Sound.

The Town of Sudbury, on the Canadian Pacific Railway, is the centre of the industry. A few years ago experts from the United States Navy Department, who examined the Sudbury deposits, estimated in their report that there were 650,000,000 tons of ore in sight. This ore, which is a nickeliferous pyrrhotite contains from $1\frac{1}{2}$ to $3\frac{1}{2}$ per cent. of nickel and from 2 to 4 per cent. copper. Since then other discoveries have been made within an area of about 2,000 square miles, some of which are being developed. Mining operations were commenced at Sudbury in 1886, and the district now furnishes about half the world's supply. The copper-nickel matte is at present shipped to the United States, where the final stages of the processes of extraction and refining are carried on. The invention of a new electrolytic process of refining these ores and the erection of a large works at Hamilton, Ont., for this purpose will, if successful, considerably reduce the cost of production and greatly stimulate the mining of nickel. In 1899, 5,744,000 pounds of nickel were produced, valued in the matte and before being exported for refining at \$526,104, and in 1900, 7,080,000 pounds, valued at \$756,626.

All the indications point to a steady increase in the consumption of nickel and give assurance that this industry will grow to much larger proportions. The large demand for the metal has recently raised the price from 35 to 50 or 60 cents per pound. It seems probable that the greatest use for it will be in the manufacture of nickel steel. When united with steel it forms an alloy of great strength and hardness. This alloy is used in the making of cannon, small arms, armour plate, boilers and machinery, etc., where strength, malleability, capability to take a fine polish and freedom from rusting are valuable properties.

At present, copper is produced in Ontario chiefly as a by-product of the nickel industry. The most important copper-bearing section hitherto discovered extends northward from the shores of the Georgian Bay. **Copper.** This belt may be traced from the Parry Sound District to Lake Superior, a distance of over four hundred miles in a straight line, and north-



CANADA IRON FURNACE COMPANY'S WORKS, MIDLAND.
Showing Machine Shop, Engine Room and Cast House.

THE MINERAL RESOURCES OF ONTARIO

ward to the height of land. It is estimated to cover an area of 20,000 square miles, and throughout this territory there is no considerable portion in which copper-bearing rocks do not occur. Valuable veins of chalcopyrite, an ore of copper, are frequently met with, besides the nickel-copper ores already referred to. One square mile of this country, which included the Bruce mines and one or two other properties, yielded, between 1849 and 1876, \$3,300,000 worth of copper. Operations have been resumed at the Bruce mines within the past year. The Rock Lake Company is developing some promising properties in the same section. Near Parry Sound also some valuable deposits have been located and are being opened up. The improved methods for the mining and extraction of the ore recently introduced and the more favorable conditions of the market make it certain that many of these copper deposits can and will be worked most profitably. In 1900, 3,364 tons of copper were produced, valued in the form of matte at \$319,681.

Gold mining in Ontario is a new industry, and although a promising one, it cannot as yet be said to be well established. The best-known gold bearing section of Ontario lies to the west of Lake Superior and between it

Gold. and the Manitoba boundary in the Rainy River and Thunder Bay districts. It comprises a parallelogram of country about 250 miles long by 100 or 130 miles wide, lying immediately north of the State of Minnesota—a tract of at least 2,000 and probably 3,000 square miles. Here along the shores of the Lake-of-the-Woods, Rainy Lake, the Seine River, Manitou, Wabigoon and Shebandowan Lakes, and elsewhere, a great number of promising gold discoveries have been made during the past few years. Many of these will with the advent of capital and competent management become paying mines, but with a few exceptions development has not proceeded far enough to place them beyond the experimental stage. How much farther north this gold country extends it is difficult to estimate, as new discoveries are continually being made.

It is doubtful whether in any country mining of the precious metal can be undertaken to better advantage. The ore is to a large extent free milling, and its separation by crushing the quartz is not nearly so difficult or expensive as where smelting is necessary. The abundance of water and timber are also important advantages. The deposits are on an average low grade, but are frequently of enormous extent, and may be economically worked. Two of the principal mines, the Sultana and the Mikado, are now

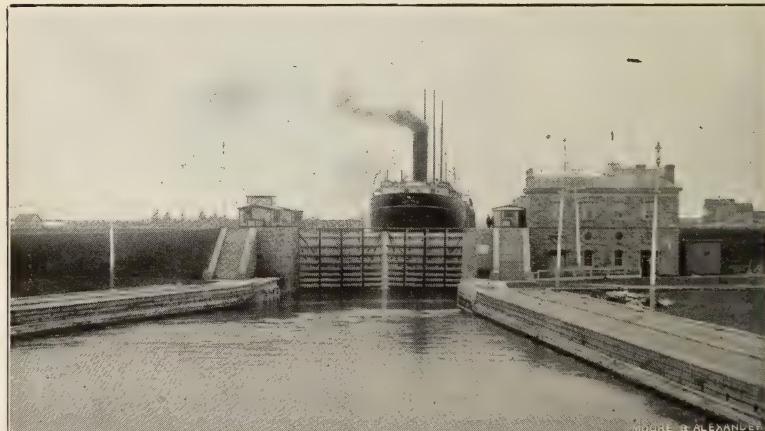
THE MINERAL RESOURCES OF ONTARIO

gas is piped to the United States, chiefly to the adjacent cities of Buffalo and Detroit. The product is valued at about \$400,000 per annum.

Ontario abounds in building stones of many kinds and often of excellent quality, including granites, gneisses, serpentines and, occasionally, marbles. Limestones and sandstones are quarried in a great Building Stone. many places in the southern and thickly inhabited parts of the

Province, chiefly for local use, but also for the supply of the larger cities, and to a small extent for export. In the products of clay-brick, tile, terra cotta and sewer pipe - the output is limited only by the market. The value of the structural materials and clay products for the year 1899, was estimated to be \$3,500,000, and for 1900, nearly \$4,000,000, giving employment to 6,800 operators.

Corundum, graphite and mica are now being produced in considerable quantities, and gypsum and talc to a smaller extent.



SAULT STE. MARIE.—THROUGH THE CANADIAN LOCK.

THE MINERAL RESOURCES OF ONTARIO

owned by English companies, and not a little foreign capital, both English and American, is being interested.

In many other parts of Ontario promising discoveries have been made, such as at Michipicoten on Lake Superior, and in the county of Hastings in Eastern Ontario, where a good deal of the ore is of a refractory nature and yields arsenic as well as gold. In 1899, 59,615 tons of ore were milled, producing 27,594 ounces of gold valued at \$424,568, giving an average of about \$7.00 per ton.

The production of silver from the mines near Port Arthur,—some of which have lately been reopened—amounted in 1900 to 160,612 Silver. ounces, valued at \$96,367.

Among the non-metallic substances, Ontario possesses the basis of two permanent and important industries in its salt beds and petroleum wells.

Salt and Petroleum. The whole shore of Lake Huron from the latitude of Kincardine southward, and for many miles inland, is underlaid by thick beds of salt, supplying a high grade of salt, used not only as such, but also as the raw material for bi-carbonate of soda, soda-ash, bleaching powder and other essentials for the textile and other industries.

The petroleum industry leads all others of a mineral nature in the value of yearly output, and affords an admirable example of what enterprise and skill can do in the profitable utilization of raw material.

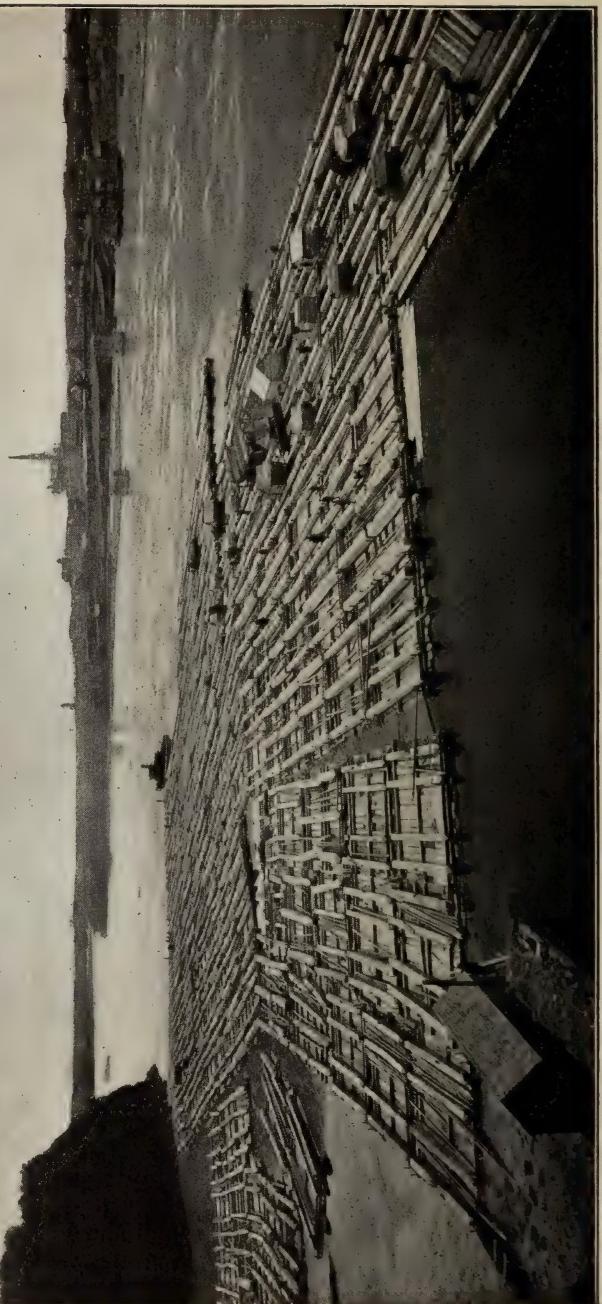
Statistics of production for the year 1900 are as follows :

	Quantity.	Value.
Petroleum, Imperial gallons	23,381,783	
Illuminating oil "	11,783,755	\$1,076,242
Lubricating oil "	1,980,428	232,805
Benzine & Nephtha "	1,463,599	174,346
Gas, fuel, oils and tar "	3,669,102	200,934
Paraffin wax and candles, lbs	4,599,683	184,718

The number of working wells in 1900 was about 10,000. The centres of the industry are the towns of Petrolia and Sarnia.

The cement business has also undergone satisfactory development during the past few years. The product for 1900 amounted to 432,154 barrels valued at \$698,015.

Natural Gas. The existence of natural gas in Ontario was first discovered in 1889, since which date a great many wells have been sunk, principally in the counties of Welland and Essex. The greater part of the



BART OF SAWN LUMBER
ON THE OTTAWA RIVER.

The Forest Wealth of Ontario

HE forest trees of Ontario are more varied in species than those of any other Province in the Dominion. What is now the settled portion was once entirely covered with a dense growth of hardwood trees, consisting chiefly of oak, hickory, basswood, maple, elm, ash and beech. Coniferous trees were comparatively few. In the south the original forest has now largely disappeared, having gradually receded as the land was brought under cultivation, until at the present time, only about twenty per cent. of this portion of Ontario is forest land. With the forest has also receded the lumber industry, which for years has been and still is one of Ontario's primary sources of wealth.

Northern Ontario, the present seat of the lumbering operations is still a tree covered wilderness. Here the growth belongs largely to the coniferous varieties such as the pine, spruce, balsam, cedar, larch and hemlock, with the birches and poplars. In the southern limits of the district, large and valuable tracts of hardwood exist ; but as progress is made northward, these trees become fewer in number until they finally disappear from the forest. The north is not so rich in variety of species as the south originally was, but the great extent of its forests, and the growing demand for the kinds of wood they contain, make them of great importance in considering the country's forest wealth.

Foremost among the trees of Ontario, both for value and commercial importance is the white or Weymouth pine. Pine has long been the chief wood exported, and is still the main object of lumbering operations. While the quantity of pine still existing in Ontario is difficult to estimate, and is not nearly so large as it once was, it is admitted by competent authorities that the Province still possesses a larger supply of this wood than is to be found anywhere else on the continent of America.

Next in importance is the spruce, a tree which is found almost everywhere in the North in large quantities, intermingled with the other forest growth. It is indeed the most abundant tree in

THE FOREST WEALTH OF ONTARIO

this portion of Ontario. The farther north one proceeds, the more plentiful does the spruce become, until after the divide, or height of land, is crossed, a continuous forest of spruce extending to the shores of Hudson Bay, is found to exist, which is probably the most extensive in the world.

Canadian spruce is admittedly superior to the European variety for the manufacture of wood pulp, which is in increasing demand for paper, textile, fabrics, and a great number of other articles. Ontario therefore possesses a most valuable asset in its extensive forests of these trees. The exploration parties sent out by the Government to ascertain the resources of the northern districts in 1900, estimated the amount of pulpwood in the region covered by their exploration at 288,000,000 cords.

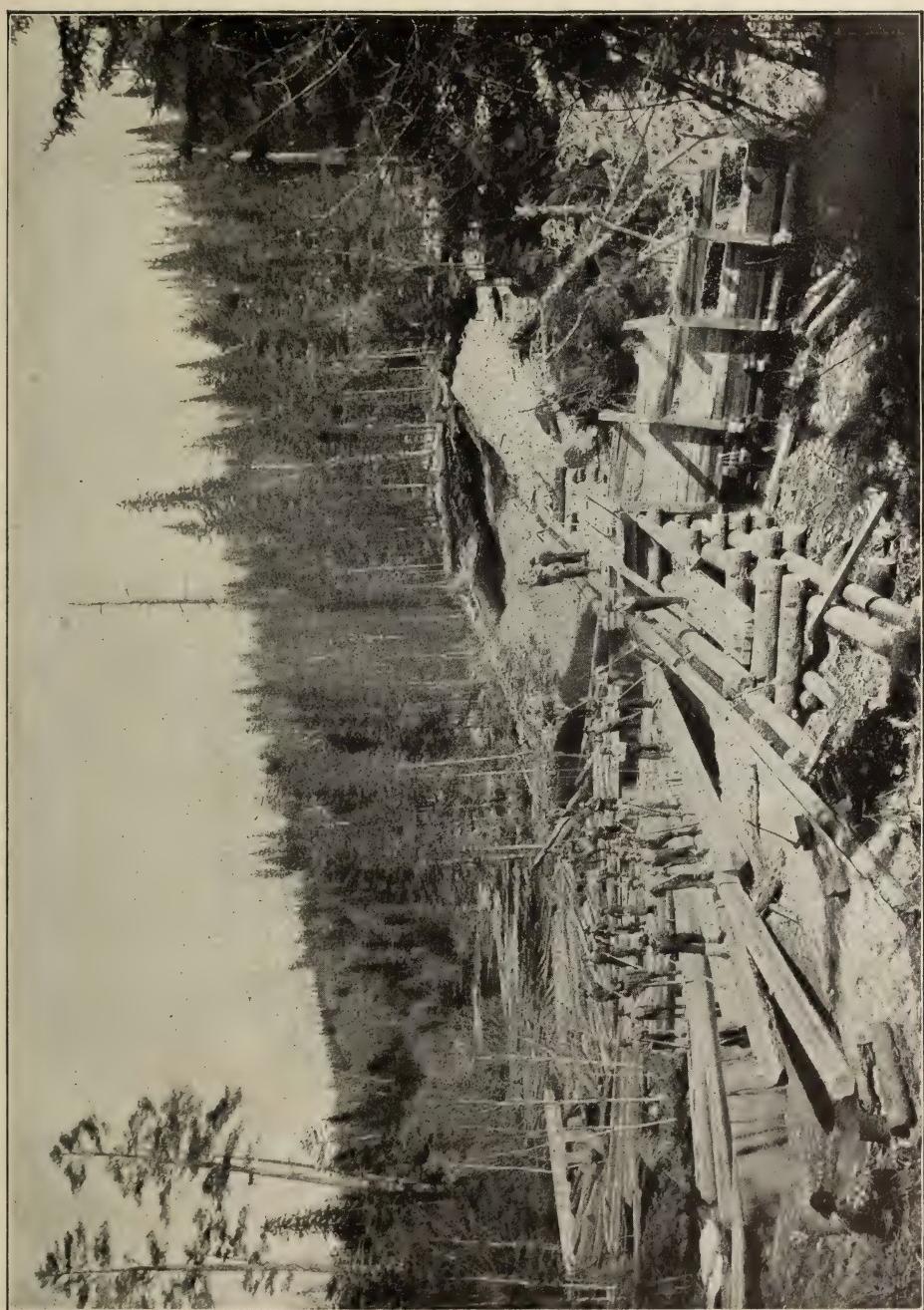
Wood pulp was first used for making news-paper, but has now extended, with the perfecting of the process, to almost all grades of paper manufacture. After the trees are felled, they are hauled to the rivers and lakes, which so abound in the north, and floated down stream to the pulp mill. The pulp mills at Sault Ste. Marie are a good example of the industry and have already been described. Not only has Ontario an almost limitless supply of the right kind of raw material (which is readily available) but she has also extensive water powers and suitable labour, both important factors in the successful manufacture of pulp.

Not nearly as much hardwood is exported from Ontario as formerly, but the supply is still large—larger perhaps than is generally supposed—and will continue to supply domestic consumption and contribute to export for years to come.

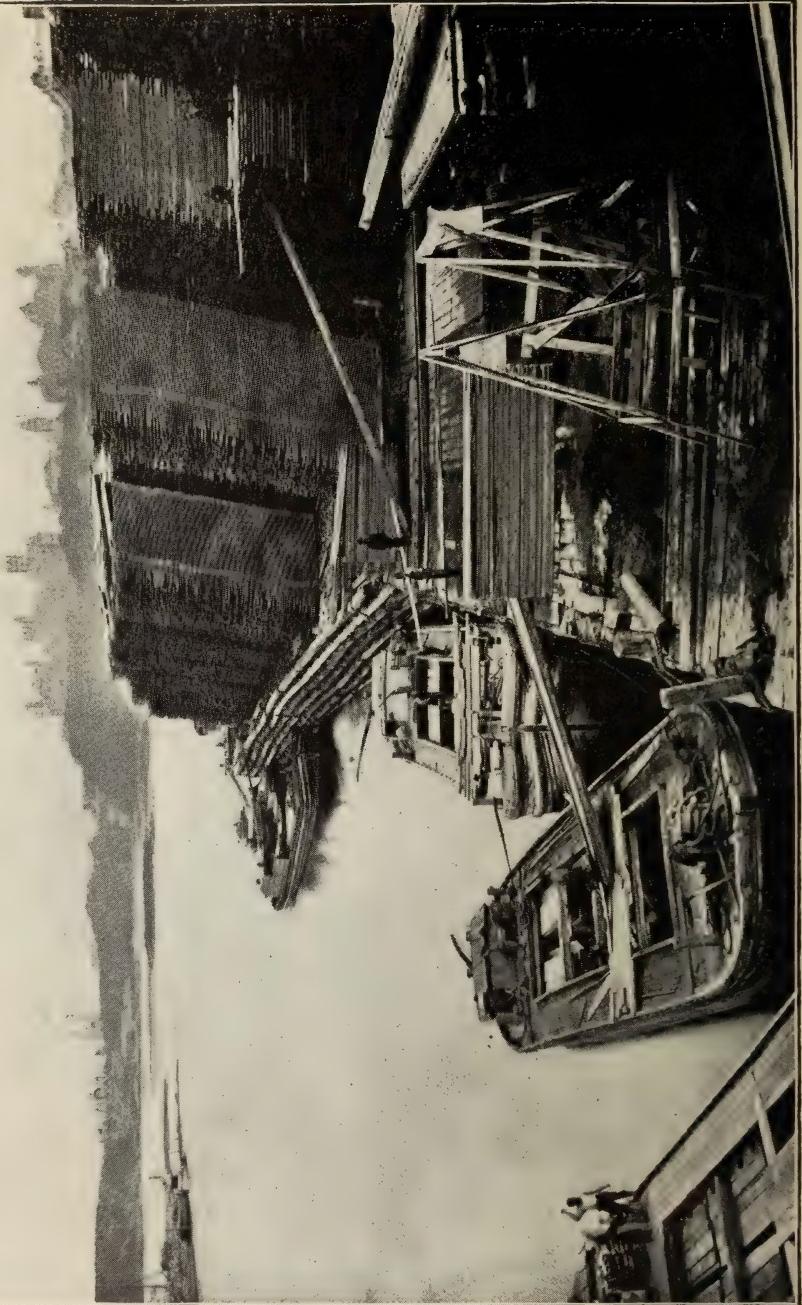
Ontario is the centre of the wood employing industries of Canada, and manufactures household furniture, doors, sashes, blinds, matches, etc., for export. The value of the exports of the Province in wood, wood products, and the manufactures of wood, is about \$10,000,000 annually.

Under a recent Ontario statute, pine, spruce, and other soft woods, must be sawn or manufactured in the Province, and cannot be exported in the log. As a consequence, the saw-milling industry is more active than at any previous time in its history, and gives employment to a large number of persons.

About 20,000 square miles of timber land is under lease to lumbermen at the present time, and the annual revenue derived by the Province from this source is very large.



LUMBER CHUTE.
Constructed to overcome fall in River.



THE LUMBER INDUSTRY NEAR OTTAWA.

Commercial Fisheries

HE commercial fisheries of Ontario are of inestimable value as a national possession, and constitute an important field of industry. The fisheries of the Great Lakes are the most extensive in the world so far as fresh water fish are concerned, while in addition, the northern and north-western waters teem with the finer qualities of fish. The fishing industry is now carefully regulated by the Government of the Province, and under the judicious policy that has lately been adopted, it is likely in the near future to afford a livelihood to considerable numbers of people, and become an important and continuous source of food supply and revenue.

The principal fish found in the waters of the Province are the whitefish, salmon, trout, herring, sturgeon, bass, pickerel, pike, and maskinonge.

Leading Varieties. The industry gives employment to about 2,500 men, and represents an investment of three quarters of a million dollars in tugs, boats, ice houses, and appliances. The total catch for 1899 was 28,372,000 pounds, valued at \$1,590,500. The principal kinds of fish caught were whitefish, 3,299,000 lbs.; herring, 8,156,000 lbs.; trout, 7,379,000 lbs.; pike and pickerel, 5,430,000 lbs. The major portion of the catch finds a ready market in the United States.

The production of cavaire from the roe of the sturgeon is one branch of the fishing industry in the Lake-of-the-Woods district.

To the salt water fisheries of Hudson Bay, some reference has already been made, but the returns are not included in the figures given above. When railway communication is opened up, as it is likely to be in the near future, the product of this sea will doubtless form an important factor in the industry.

Salt Water Fisheries. The Hudson Bay Company have established salmon fisheries along the lower part of the several rivers discharging into Ungava Bay. The fishermen employed are all Esquimaux. Trout are taken in large quantities and of good size, the largest reported weighing fourteen pounds and the average being from six to seven pounds. In addition to salmon and trout, cod, whiting, hake, pollock and other fish abound.

COMMERCIAL FISHERIES

The whale fisheries of Hudson Bay are also extensive, and for forty years past American whalers have regularly found a harvest there.
Whale Fishery.

The value of fish and whale oil alone taken from Hudson Bay by United States whalers and the Hudson Bay Company is estimated at \$150,000 a year. The hair seal is also very numerous in these waters.

How to Secure Land

INFORMATION FOR SETTLERS

TN order to obtain public land for settlement, it is necessary to apply to the Crown Lands Agents in the district where it is desired to locate.

Publications giving full information regarding the special characteristics and advantages of the districts open for settlement, the price of land, settlement regulation, maps etc., may be obtained free on application to P. Byrne, Ontario Government Agent, 7 James St., Liverpool, England, or to Thos. Southworth, Director of Colonization, Toronto, Ontario, Canada.

